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Version 1.0

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Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

Declaration of Conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This device is in conformity with the following EC/EMC directives:

- ❑ **EN 55022** Limits and methods of mesurement of radio disturbance characteristics of information technology equipment
- ❑ **EN 61000-3-2** Disturbances in supply systems caused
- ❑ **EN 61000-3-3** Disturbances in supply systems caused by household appliances and similar electrical equipment " Voltage fluctuations"
- ❑ **EN 55024** Information technology equipment-Immunity characteristics-Limits and methods of measurement
- ❑ **EN 60950** Safety for information technology equipment including electrical business equipment
- ❑ **CE marking** CE

Canadian Department of Communications

This class B digital apparatus meets all requirements of the Canadian Interference-causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Réglement sur le matériel brouilieur du Canada.

About the Manual

The manual consists of the following:

Chapter 1 Introducing the Motherboard	Describes features of the motherboard.	⇨ page 1
Chapter 2 Using BIOS	Provides information on using the BIOS Setup Utility.	⇨ page 7
Chapter 3 Using the Motherboard Software	Describes the motherboard software.	⇨ page 37
Chapter 4 Trouble Shooting	Provides basic trouble shooting tips.	⇨ page 41
Multi-language Quick Installation Guide	Describes installation of motherboard components.	⇨ page 45
Appendix	Provides header pin definition and jumper setting.	⇨ page 79

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Chapter 1
Introducing the Motherboard

Introduction

Thank you for choosing the **H61H2-I5** motherboard. This motherboard is a high performance, enhanced function motherboard designed to support the LGA1155 socket for Intel® Sandy/Ivy Bridge Processors for high-end business or personal desktop markets.

This motherboard is based on Intel® H61 Express Chipset for best desktop platform solution. H61 is a single-chip, highly integrated, high performance Hyper-Threading peripheral controller, unmatched by any other single chip-device controller. This motherboard supports up to 16 GB of system memory with dual channel DDR3 1600/1333/1066 MHz. It provides one PCI Express x16 slot for extending usage.

It implements an EHCI (Enhanced Host Controller Interface) compliant interface that provides eight USB 2.0 ports (four USB 2.0 ports at the rear panel and two USB 2.0 headers support additional four USB 2.0 ports).

The motherboard is equipped with advanced full set of I/O ports in the rear panel, including PS/2 mouse and PS/2 keyboard connectors, one D-sub (VGA) port or optional VGA header, one RJ45 LAN connector, four USB 2.0 ports and audio jacks for line-in, line-out and microphone.

In addition, this motherboard supports four SATA 3.0Gb/s connectors for expansion.

Package Contents

Your motherboard package ships with the following items:

- ❑ H61H2-I5 Motherboard
- ❑ User Manual (Quick Installation Guide inside)
- ❑ DVD
- ❑ I/O Shield
- ❑ 2 SATA 3.0Gb/s Cables

The package contents above are for reference only, please take the actual package items as standard.

Specifications

CPU	• LGA1155 socket for Intel® Sandy/Ivy Bridge Processors • DMI 5.0GT/s • TDP: 65W (up to 77W) *Note: Please go to ECS website for the latest CPU support list.*
Chipset	• Intel® H61 Chipset
Memory	• Dual-channel DDR3 memory architecture • 2 x 240-pin DDR3 Non-ECC un-buffered DIMM sockets support up to 16 GB • Supports DDR3 1600/1333/1066 MHz DDR3 SDRAM *Note: Please go to ECS website for the latest Memory support list.*
Expansion Slot	• 1 x PCI Express x16 slot
Storage	• Supported by Intel® H61 Express Chipset - 4 x Serial ATA 3.0Gb/s devices
Audio	• VIA VT1705CF 6-Ch High Definition audio CODEC - Compliant with HD audio specification
LAN	• Realtek RTL 8111E Gigabit LAN • Realtek RTL 8105 10/100 LAN (Co-lay)
Rear Panel I/O	• 1 x PS/2 keyboard & PS/2 mouse connectors • 4 x USB 2.0 ports • 1 x D-sub (VGA) port (or optional VGA header) • 1 x RJ45 LAN connector • 1 x Audio port (line in, microphone in, line out)
Internal I/O Connectors & Headers	• 1 x 24-pin ATX Power supply connector • 1 x 4-pin ATX12V1 Power supply connector • 1 x 4-pin CPU_FAN connector • 1 x 3-pin SYS_FAN connector • 2 x USB 2.0 headers support additional four USB 2.0 ports • 4 x Serial SATA 3.0Gb/s connectors • 1 x COM header • 1 x ME_UNLOCK header • 1 x Clear CMOS jumper • 1 x Front Panel USB power select jumper • 1 x Rear USB/PS2 power select jumper • 1 x Case open header • 1 x Front Panel switch/LED header • 1 x Front Panel audio header • 1 x Speaker header

System BIOS	• AMI BIOS with 32Mb SPI Flash ROM • Supports Plug and Play • Supports ACPI & DMI • Supports STR (S3) /STD (S4) • Supports Hardware monitor • Audio, LAN, can be disabled in BIOS • F7 hot key for boot up devices option • Supports GUI UEFI BIOS • Supports Multi-Language • Supports AC'97/HD Audio auto detect (default) • Supports PgUp clear CMOS Hotkey (Has PS2 KB Model only)
Form Factor	• ITX Size, 170mm x 170mm

Motherboard Components

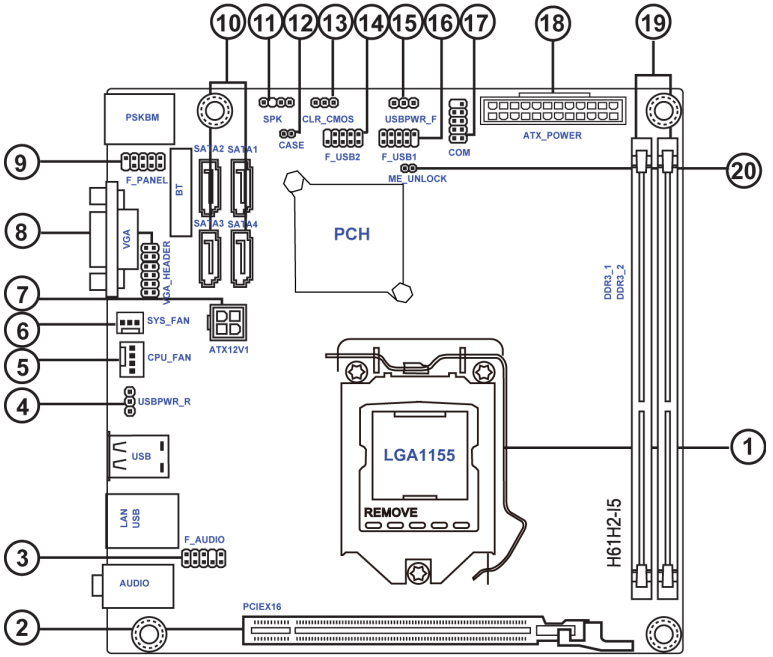
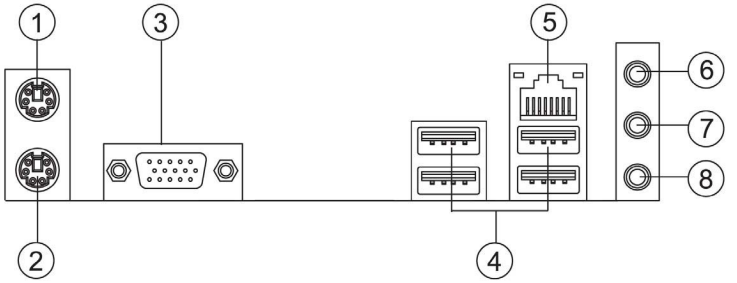


Table of Motherboard Components

LABEL	COMPONENTS
1. CPU Socket	LGA1155 socket for Intel® Sandy/Ivy Bridge Processors
2. PCIEX16	PCI Express slot for graphics interface
3. F_AUDIO	Front panel audio header
4. USBPWR_R	Rear USB/PS2 power select jumper
5. CPU_FAN	4-pin CPU cooling fan connector
6. SYS_FAN	3-pin system cooling fan connector
7. ATX12V1	4-pin +12V power connector
8. VGA_HEADER	VGA header (Optional)
9. F_PANEL	Front panel switch/LED header
10. SATA1~4	Serial ATA 3.0 Gb/s connectors
11. SPK	Speaker header
12. CASE	Case open header
13. CLR_CMOS	Clear CMOS jumper
14. F_USB2	Front panel USB 2.0 header
15. USBPWR_F	Front Panel USB power select jumper
16. F_USB1	Front panel USB 2.0 header
17. COM	Onboard serial port header
18. ATX_POWER	Standard 24-pin ATX power connector
19. DDR3_1~2	240-pin DDR3 Module slots
20. ME_UNCLOCK	ME Unlock header-for factory use only

I/O Ports



1. PS/2 Mouse (green)
Use the upper PS/2 port to connect a PS/2 mouse.

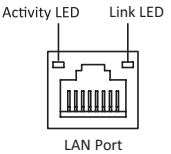
2. PS/2 Keyboard (purple)
Use the lower PS/2 port to connect a PS/2 keyboard.

3. VGA Port (or optional VGA header)
You can connect the display device to the VGA port.

4. USB 2.0 Ports
Use the USB 2.0 ports to connect USB 2.0 devices.

5. LAN Port
Connect an RJ-45 jack to the LAN port to connect your computer to the Network.

LAN LED	Status	Description
Activity LED	OFF	No data
	Orange blinking	Active
Link LED	OFF	No link
	Green	Link



6. Line-in (blue)
It can be connected to an external CD/DVD player, Tape player or other audio devices for audio input.

7. Line-out (lime)
It is used to connect to speakers or headphones.

8. Microphone (pink)
It is used to connect to a microphone.

Chapter 2

Using BIOS

About the Setup Utility

The computer uses the latest "American Megatrends Inc." BIOS with support for Windows Plug and Play. The CMOS chip on the motherboard contains the ROM setup instructions for configuring the motherboard BIOS.

The BIOS (Basic Input and Output System) Setup Utility displays the system's configuration status and provides you with options to set system parameters. The parameters are stored in battery-backed-up CMOS RAM that saves this information when the power is turned off. When the system is turned back on, the system is configured with the values you stored in CMOS.

The BIOS Setup Utility enables you to configure:

- Hard drives, diskette drives and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power Management features

The settings made in the Setup Utility affect how the computer performs. Before using the Setup Utility, ensure that you understand the Setup Utility options.

This chapter provides explanations for Setup Utility options.

The Standard Configuration

A standard configuration has already been set in the Setup Utility. However, we recommend that you read this chapter in case you need to make any changes in the future.

This Setup Utility should be used:

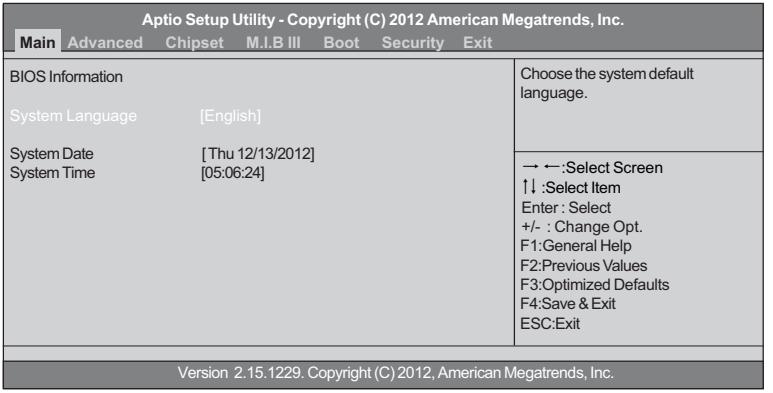
- when changing the system configuration
- when a configuration error is detected and you are prompted to make changes to the Setup Utility
- when trying to resolve IRQ conflicts
- when making changes to the Power Management configuration
- when changing the password or making other changes to the Security Setup

Entering the Setup Utility

When you power on the system, BIOS enters the Power-On Self Test (POST) routines. POST is a series of built-in diagnostics performed by the BIOS. After the POST routines are completed, the following message appears:

Press DEL to enter SETUP

Press the delete key to access BIOS Setup Utility.



Resetting the Default CMOS Values

When powering on for the first time, the POST screen may show a "CMOS Settings Wrong" message. This standard message will appear following a clear CMOS data at factory by the manufacturer. You simply need to Load Default Settings to reset the default CMOS values.

Note: Changes to system hardware such as different CPU, memories, etc. may also trigger this message.

American Megatrends
H61H2-I5 Release 12/13/2012
Version 2.02.1205. Copyright (C) 2010 American Megatrends, Inc.
Press <F7> to enter BBS POPUP
Press <DEL> or <F2> to enter setup.
CMOS Setting Wrong

Using BIOS

When you start the Setup Utility, the main menu appears. The main menu of the Setup Utility displays a list of the options that are available. A highlight indicates which option is currently selected. Use the cursor arrow keys to move the highlight to other options. When an option is highlighted, execute the option by pressing <Enter>.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a triangle ▶) lead to submenus that enable you to change the values for the option. Use the cursor arrow keys to scroll through the items in the submenu.

In this manual, default values are enclosed in parenthesis. Submenu items are denoted by a triangle ▶.

The default BIOS setting for this motherboard apply for most conditions with optimum performance. We do not suggest users change the default values in the BIOS setup and take no responsibility to any damage caused by changing the BIOS settings.

BIOS Navigation Keys

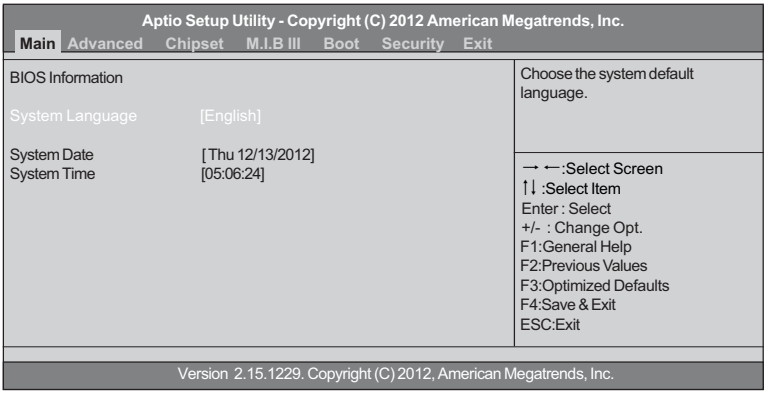
The BIOS navigation keys are listed below:

KEY	FUNCTION
ESC	Exits the current menu
↑↓→←	Scrolls through the items on a menu
+/-	Change Opt.
Enter	Select
F1	General Help
F2	Previous Value
F3	Optimized Defaults
F4	Save & Exit

For the purpose of better product maintenance, the manufacture reserves the right to change the BIOS items presented in this manual. The BIOS setup screens shown in this chapter are for reference only and may differ from the actual BIOS. Please visit the manufacture's website for updated manual.

Main Menu

When you enter the BIOS Setup program, the main menu appears, giving you an overview of the basic system information. Select an item and press <Enter> to display the submenu.



System Language (English)

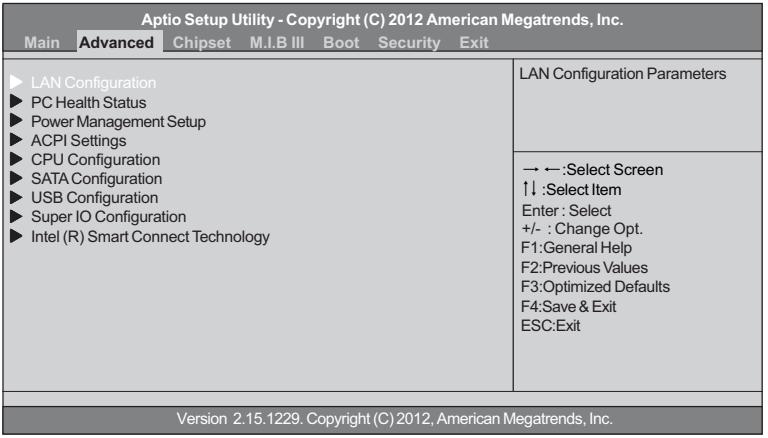
This item is used to set system language.

System Date & Time

The Date and Time items show the current date and time on the computer. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

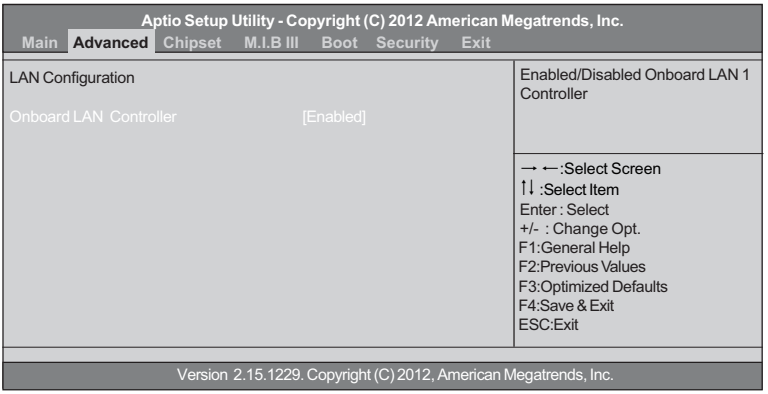
Advanced Menu

The Advanced menu items allow you to change the settings for the CPU and other system.



▶LAN Configuration

The item in the menu shows the LAN-related information that the BIOS automatically detects.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
LAN Configuration
Onboard LAN Controller [Enabled]
Enabled/Disabled Onboard LAN 1 Controller
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

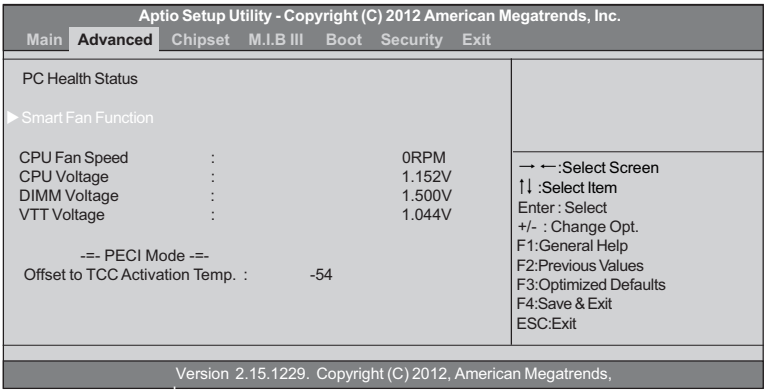
Onboard LAN Controller (Enabled)

Use this item to enable or disable the Onboard LAN.

Press <Esc> to return to the Advanced Menu page.

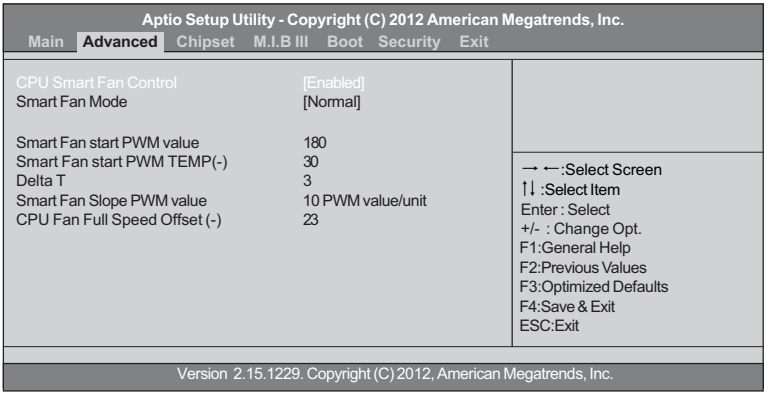
►PC Health Status

On motherboards support hardware monitoring, this item lets you monitor the parameters for critical voltages, temperatures and fan speeds.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
PC Health Status
►Smart Fan Function
CPU Fan Speed : 0RPM
CPU Voltage : 1.152V
DIMM Voltage : 1.500V
VTT Voltage : 1.044V
-=- PECI Mode -=-
Offset to TCC Activation Temp. : -54
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends,

►Smart Fan Function

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
CPU Smart Fan Control [Enabled]
Smart Fan Mode [Normal]
Smart Fan start PWM value 180
Smart Fan start PWM TEMP(-) 30
Delta T 3
Smart Fan Slope PWM value 10 PWM value/unit
CPU Fan Full Speed Offset (-) 23
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

CPU Smart Fan Control (Enabled)

This item allows you to enable/disable the control of the CPU fan speed by changing the fan voltage.

Smart Fan Mode (Normal)

This item allows you to select the fan mode (Normal, Quiet, Silent, or Manual) for a better operation environment. If you choose Normal mode, the fan speed will be auto adjusted depending on the CPU temperature. If you choose Quiet mode, the fan speed will be auto minimized for quiet environment. If you choose Silent mode, the fan speed will be auto restricted to make system more quietly. If you choose Manual mode, the fan speed will be adjust depending on users' parameters.

Smart Fan Start PWM value (180)

This item is used to set the start PWM value of the smart fan.

Smart Fan Start TEMP(-) (30)

This item is used to set the start temperature of the smart fan.

DeltaT (3)

This item specifies the range that controls CPU temperature and keeps it from going so high or so low when smart fan works.

Smart Fan Slope PWM value (10 PWM value/unit)

This item is used to set the Slope Select PWM of the smart fan.

CPU Fan Full Speed Offset(-) (23)

This item is used to set the CPU fan full speed offset value.

Press <Esc> to return to the PC Health Status page.

System Component Characteristics

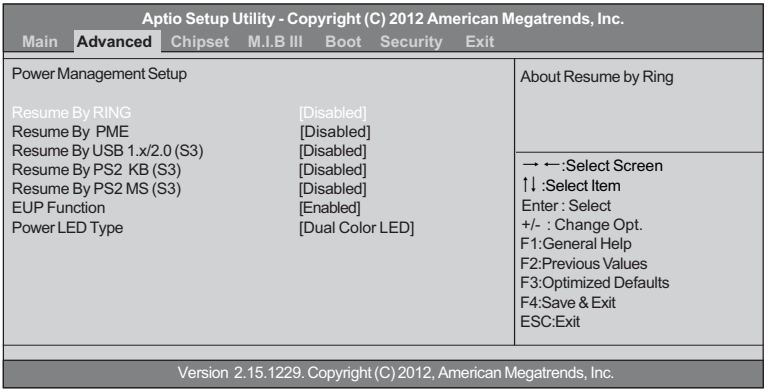
These items display the monitoring of the overall inboard hardware health events, such as CPU fan speed, CPU & DIMM voltage... etc.

- CPU Fan Speed
- CPU Voltage
- DIMM Voltage
- VTT Voltage

Press <Esc> to return to the Advanced Menu page.

►Power Management Setup

This page sets up some parameters for system power management operation.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
Power Management Setup
Resume By RING [Disabled]
Resume By PME [Disabled]
Resume By USB 1.x/2.0 (S3) [Disabled]
Resume By PS2 KB (S3) [Disabled]
Resume By PS2 MS (S3) [Disabled]
EUP Function [Enabled]
Power LED Type [Dual Color LED]
About Resume by Ring
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

Resume By RING (Disabled)

The system can be turned off with a software command. If you enable this item, the system can automatically resume if there is an incoming call on the Modem. You must use an ATX power supply in order to use this feature.

Resume By PME (Disabled)

The system can be turned off with a software command. If you enable this item, the system can automatically resume if there is an incoming call on the PCI Modem or PCI LAN card. You must use an ATX power supply in order to use this feature. Use this item to do wake-up action if inserting the PCI card.

Resume By USB 1.x/2.0(S3) (Disabled)

This item allows you to enable/disable the USB device wakeup function from S3 mode.

Resume By PS2 KB (S3) (Disabled)

This item enables or disables you to allow keyboard activity to awaken the system from power saving mode.

Resume By PS2 MS (S3) (Disabled)

This item enables or disables you to allow mouse activity to awaken the system from power saving mode.

EUP Function (Enabled)

This item allows user to enable or disable EUP function.

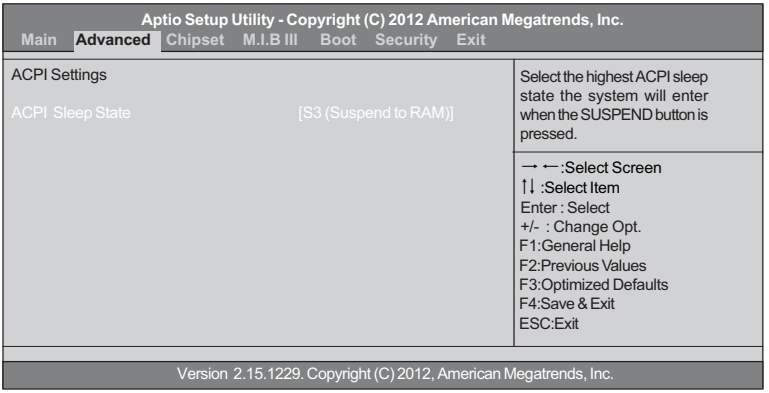
Power LED Type (Dual Color LED)

This item shows the type of the power LED.

Press <Esc> to return to the Advanced Menu page.

▶ACPI Setting

The item in the menu shows the highest ACPI sleep state when the system enters suspend.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
ACPI Settings
ACPI Sleep State [S3 (Suspend to RAM)]
Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

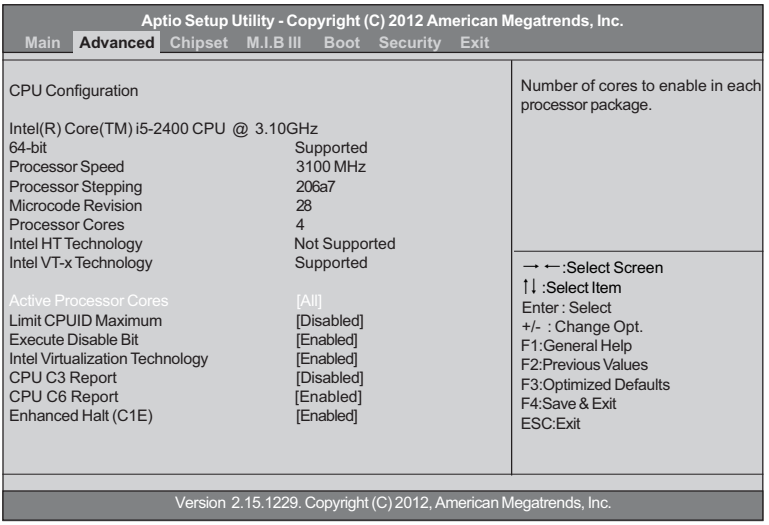
ACPI Sleep State (S3(Suspend to RAM))

This item allows user to enter the ACPI S3 (Suspend toRAM) Sleep State (default).

Press <Esc> to return to the Advanced Menu page.

▶CPU Configuration

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
CPU Configuration
Intel(R) Core(TM) i5-2400 CPU @ 3.10GHz
64-bit Supported
Processor Speed 3100 MHz
Processor Stepping 206a7
Microcode Revision 28
Processor Cores 4
Intel HT Technology Not Supported
Intel VT-x Technology Supported
Active Processor Cores [All]
Limit CPUID Maximum [Disabled]
Execute Disable Bit [Enabled]
Intel Virtualization Technology [Enabled]
CPU C3 Report [Disabled]
CPU C6 Report [Enabled]
Enhanced Halt (C1E) [Enabled]
Number of cores to enable in each processor package.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

Intel(R) Core(TM) i5-2400 CPU @ 3.10GHz
This is display-only field and diaplays the information of the CPU installed in your computer.

64-bit (Supported)
This item shows the computer supports 64-bit.

Processor Speed (3100MHz)
This item shows the current processor speed.

Processor Stepping (206a7)
This item shows the processor stepping version.

Microcode Revision (28)
This item shows the Microcode version.

Processor Cores (4)
This item shows the core number of the processor.

Intel HT Technology (Not Supported)
This item shows that your computer supports Intel HT technology or not.

Intel VT-x Technology (Supported)
This item shows that your computer supports Intel VT-x technology or not.

Active Processor Cores (All)
Use this item to control the active processor cores.

Limit CPUID Maximum (Disabled)
Use this item to enable or disable the maximum CPUID value limit.

Execute Disable Bit (Enabled)
This item allows the processor to classify areas in memory by where application code can execute and where it cannot. When a malicious worm attempts to insert code in the buffer, the processor disables code execution, preventing damage or worm propagation. Replacing older computers with Execute Disable Bit enabled systems can halt worm attacks, reducing the need for virus related repair.

Intel Virtualization Technology (Enabled)
When disabled, a VMM cannot utilize the additional hardware capabilities provided by Vandor Pool Technology.

CPU C3 Report (Disabled)
Use this item to enable or disable CPU C3(ACPI C2) report to OS.

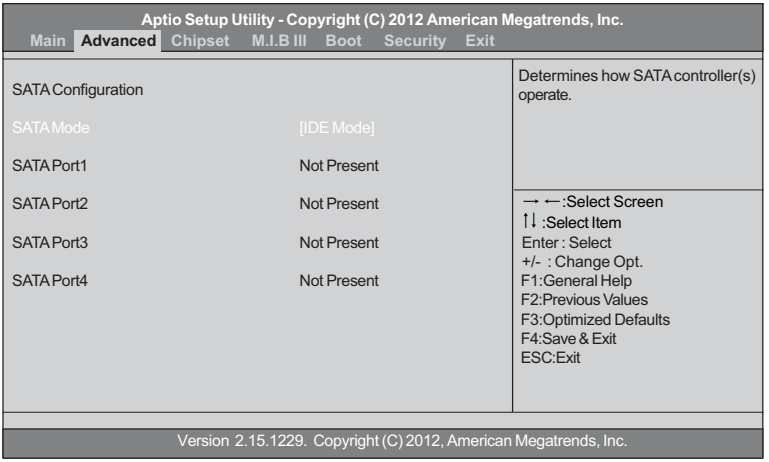
CPU C6 Report (Enabled)
Use this item to enable or disable CPU C6(ACPI C3) report to OS.

Enhanced Halt (C1E) (Enabled)
Use this item to enable the CPU energy-saving function when the system is not running.

Press <Esc> to return to the Advanced Menu page.

▶SATA Configuration

Use this item to show the mode of serial SATA configuration options.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
SATA Configuration
SATA Mode [IDE Mode]
SATA Port1 Not Present
SATA Port2 Not Present
SATA Port3 Not Present
SATA Port4 Not Present
Determines how SATA controller(s) operate.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
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SATA Mode (IDE Mode)

Use this item to select SATA mode.

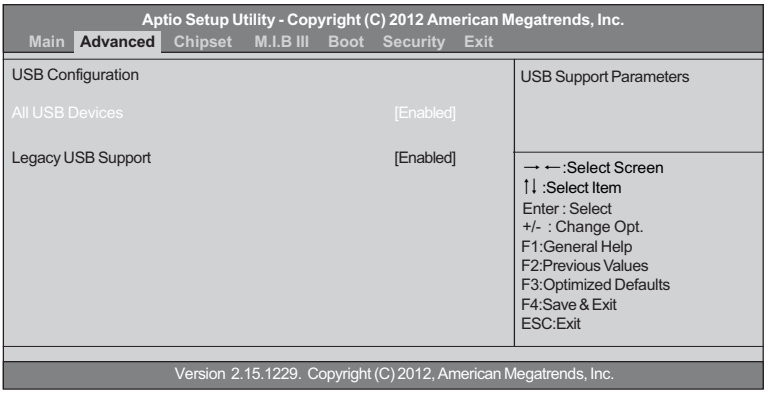
SATA Port 1~4 (Not Present)

This motherboard supports four SATA channel and each channel allows one SATA device to be installed. Use these items to configure each device on the SATA channel.

Press <Esc> to return to the Advanced Menu page.

►USB Configuration

Scroll to this item and press <Enter> to view the following screen:



All USB Devices (Enabled)

Use this item to enable or disable all USB devices.

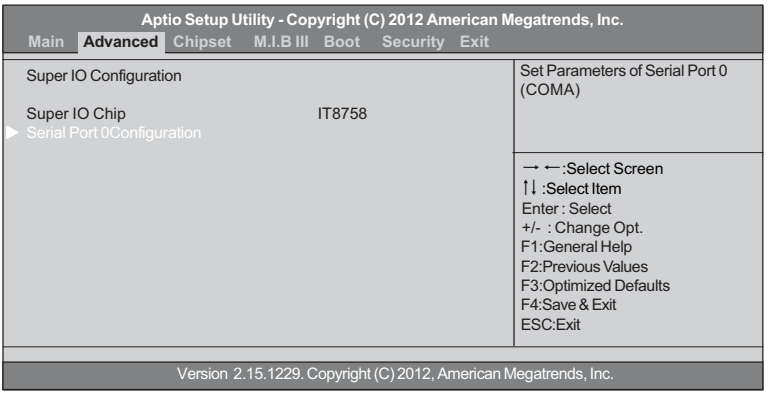
Legacy USB Support (Enabled)

Use this item to enable or disable support for legacy USB devices. Setting to Audio allows the system to detect the presence of the USB device at startup. If detected, the USB controller legacy mode is enabled. If no USB device is detected, the legacy USB support is disabled.

Press <Esc> to return to the Advanced Menu page.

▶Super IO Configuration

Use this item to show the information of the Super IO Configuration.

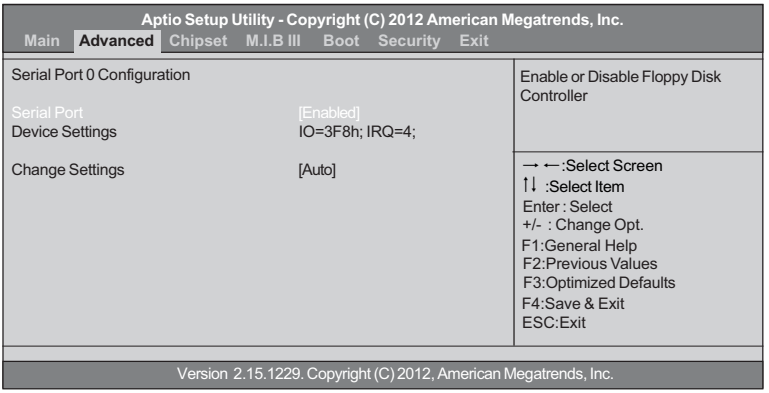

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
Super IO Configuration
Super IO Chip IT8758
▶ Serial Port 0Configuration
Set Parameters of Serial Port 0 (COMA)
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

Super IO Chip (IT8758)

This item shows the information of the super IO chip.

▶Serial Port 0 Configuration

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
Serial Port 0 Configuration
Serial Port [Enabled]
Device Settings IO=3F8h; IRQ=4;
Change Settings [Auto]
Enable or Disable Floppy Disk Controller
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

Serial Port (Enabled)

This item allows you to enable or disable serial port.

Device Settings (IO=3F8h; IRQ=4)

This item shows the information of the device settings.

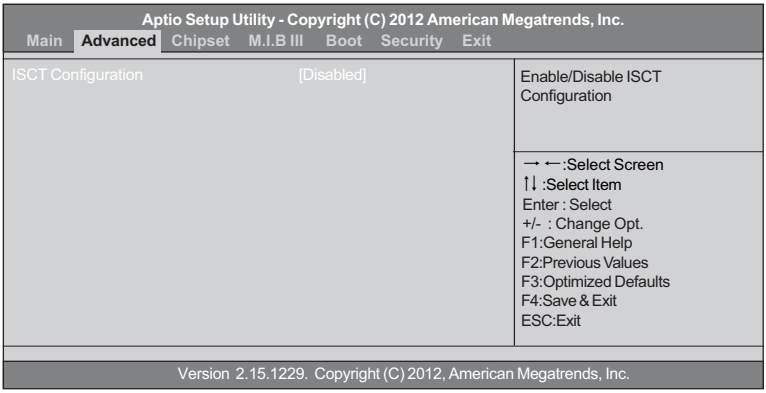
Change Settings (Auto)

Use this item to change device settings.

Press <Esc> to return to the Super IO Configuration page.

▶Intel (R) Smart Connect Technology

Scroll to this item and press <Enter> to view the following screen:

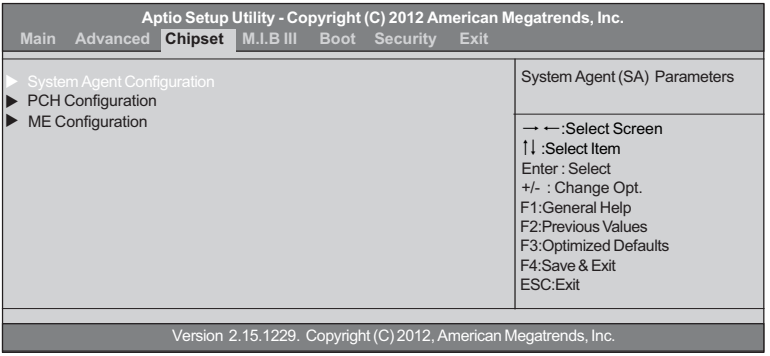


ISCT Configuration (Disabled)

Use this item to enable or disable ISCT Configuration.

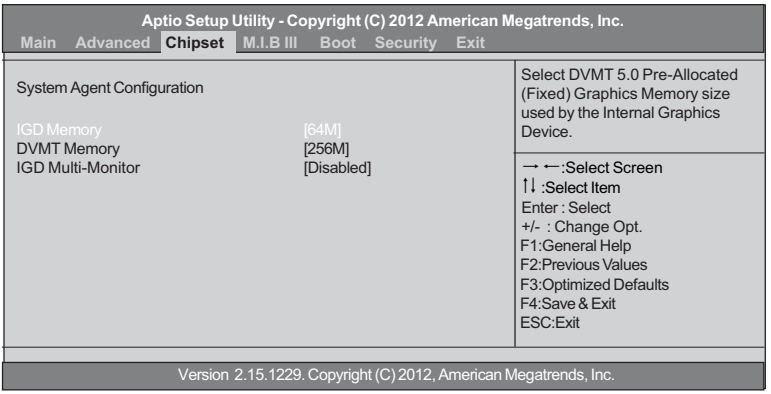
Chipset Menu

The chipset menu items allow you to change the settings for the North Bridge chipset, South Bridge chipset and other system.



▶System Agent Configuration

Scroll to this item and press <Enter> and view the following screen:


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
System Agent Configuration
IGD Memory [64M]
DVMT Memory [256M]
IGD Multi-Monitor [Disabled]
Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

IGD Memory (64M)

This item shows the information of the IGD(Internal Graphics device) memory.

DVMT Memory (256M)

When set to Fixed Mode, the graphics driver will reserve a fixed position of the system memory as graphics memory, according to system and graphics requirements.

IGD Multi-Monitor (Disabled)

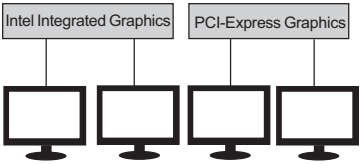
This item enables or disables IGD (Internal Graphics device) multi-monitor.

Press <Esc> to return to the chipset menu page.

Multi-Monitor technology

Multi-Monitor technology can help you to increase the area available for programs running on a single computer system through using multiple display devices.

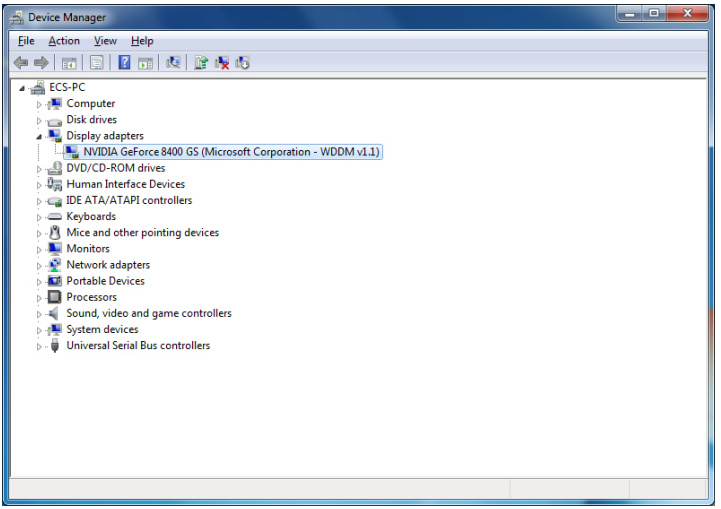
It is not only to increase larger screen viewing but also to improving personal productivity.



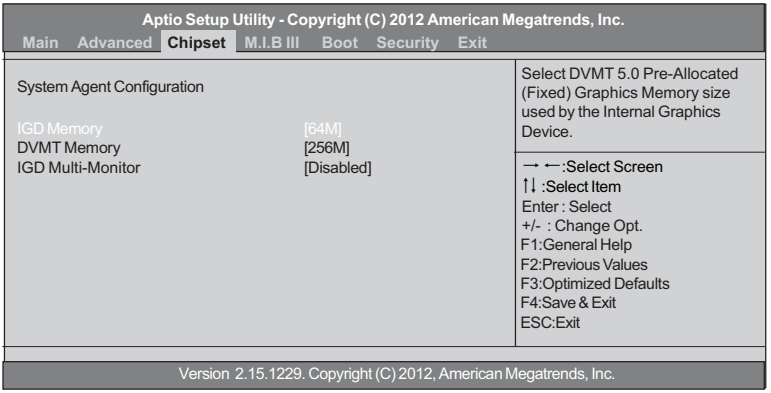
Please note that Multi-Monitor technology supports up to four monitors: one or two Intel integrated Graphics and one or two PCI-Express graphics devices under Windows 7.

Step 1. Insert ECS drives DVD to run Auto setup or browse the DVD to install Intel chipset drivers, VGA and sound drivers.(If you want know the detail information, please refer to chapter 4.)

Step 2. Install all the drivers of PCI-Express graphic cards. Click the Browse CD item, then appears the following screen. Select the driver you want to install(e.g NVIDIA GeForce 8400 GS(Microsoft Corporation-WDDM v1.1)) and double click it.

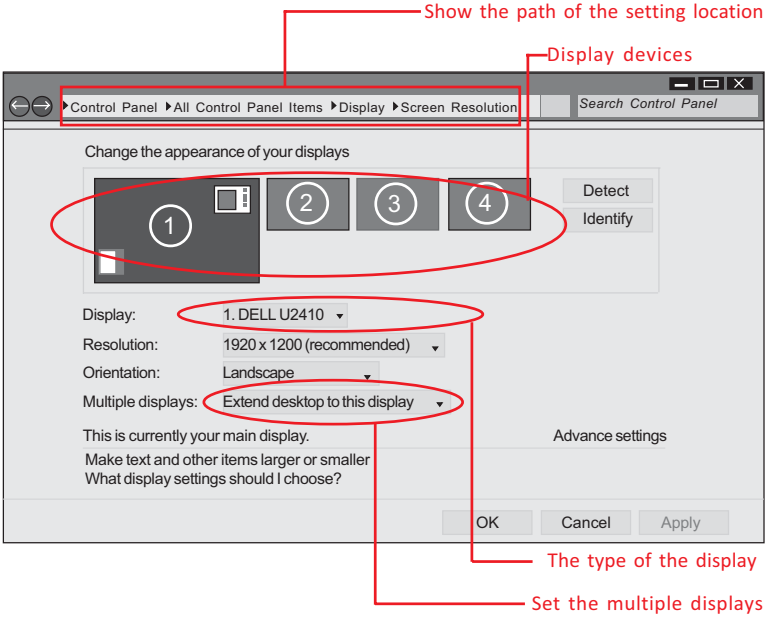


Step 3. Enable IGD Multi-Monitor from BIOS. In the following BIOS screen, please set IGD Multi-Monitor to [Enabled].

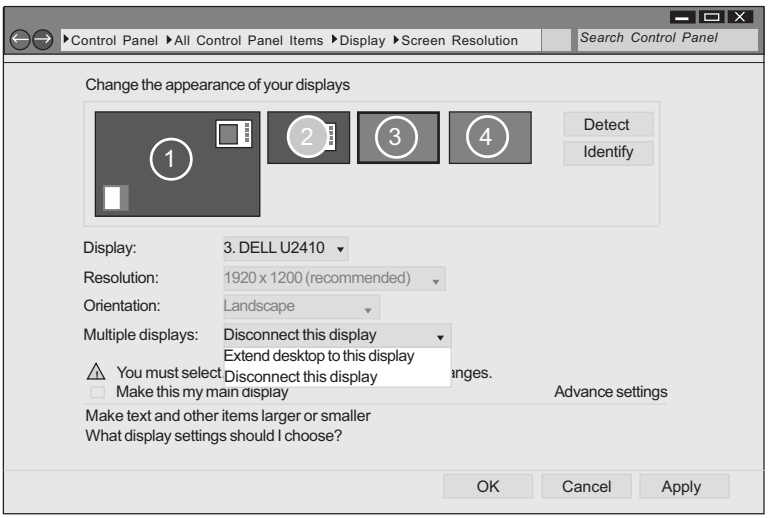

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
System Agent Configuration
IGD Memory [64M]
DVMT Memory [256M]
IGD Multi-Monitor [Disabled]
Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

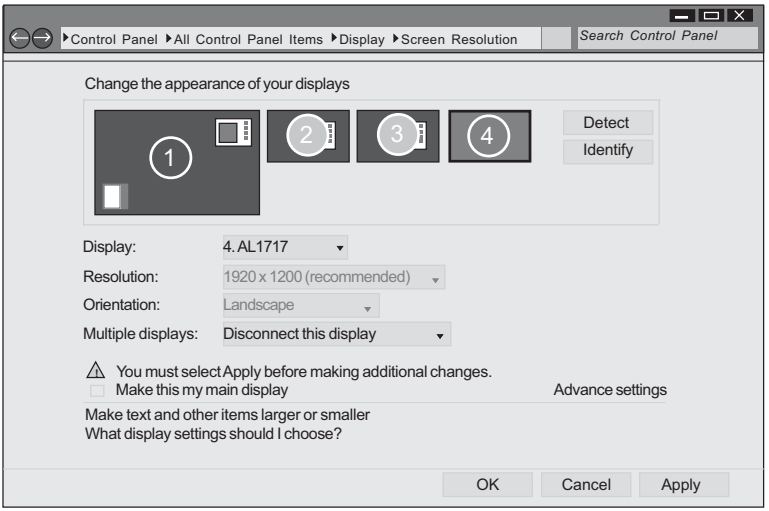
Step 4. Change the appearance of your displays under Windows 7.

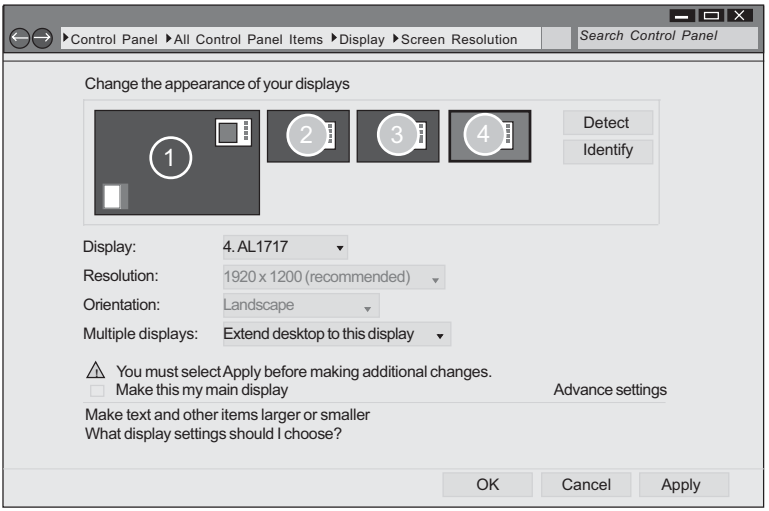
1. Enter the Control Panel menu, select the Display in the All Control Panel Items and click the Screen Resolution, then appears the following screen.



2.Select display devices, set the multiple displays option and to extend destop for display “Multi-Monitor technology”.

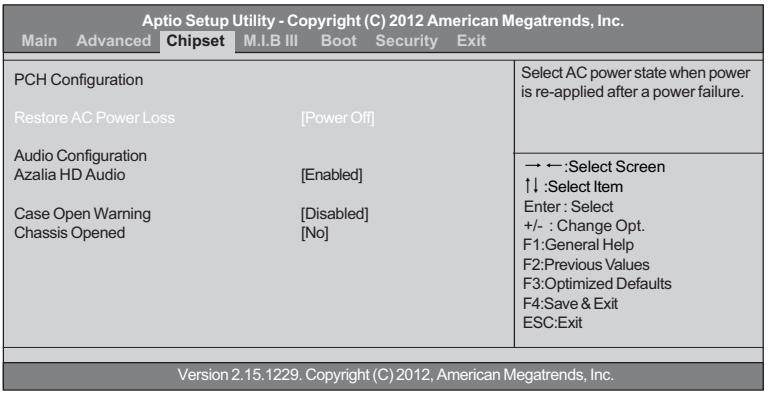



Control Panel ▸ All Control Panel Items ▸ Display ▸ Screen Resolution
Search Control Panel
Change the appearance of your displays
1
2
3
4
Detect
Identify
Display: 4. AL1717
Resolution: 1920 x 1200 (recommended)
Orientation: Landscape
Multiple displays: Disconnect this display
You must select Apply before making additional changes.
Make this my main display
Advance settings
Make text and other items larger or smaller
What display settings should I choose?
OK
Cancel
Apply


Control Panel ▸ All Control Panel Items ▸ Display ▸ Screen Resolution
Search Control Panel
Change the appearance of your displays
1
2
3
4
Detect
Identify
Display: 4. AL1717
Resolution: 1920 x 1200 (recommended)
Orientation: Landscape
Multiple displays: Extend desktop to this display
You must select Apply before making additional changes.
Make this my main display
Advance settings
Make text and other items larger or smaller
What display settings should I choose?
OK
Cancel
Apply

▶PCH Configuration

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
PCH Configuration
Restore AC Power Loss [Power Off]
Audio Configuration
Azalia HD Audio [Enabled]
Case Open Warning [Disabled]
Chassis Opened [No]
Select AC power state when power is re-applied after a power failure.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

Restore AC Power Loss (Power Off)

This item enables your computer to automatically restart or return to its operating status.

Audio Configuration

This item shows the information of the audio configuration.

Azalia HD Audio (Enabled)

This item enables or disables Azalia HD audio.

Case Open Warning (Disabled)

This item enables or disables the warning if the case is opened up, and the item below indicates the current status of the case.

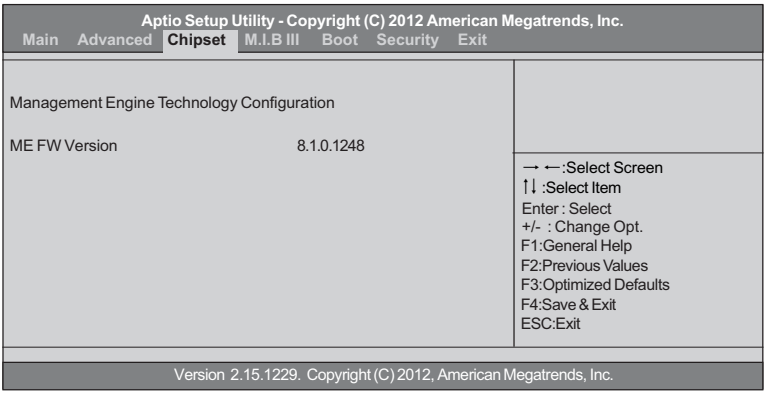
Chassis Opened (No)

This item indicates whether the case has been opened.

Press <Esc> to return to the chipset menu page.

▶ **ME Configuration**

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
Management Engine Technology Configuration
ME FW Version 8.1.0.1248
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

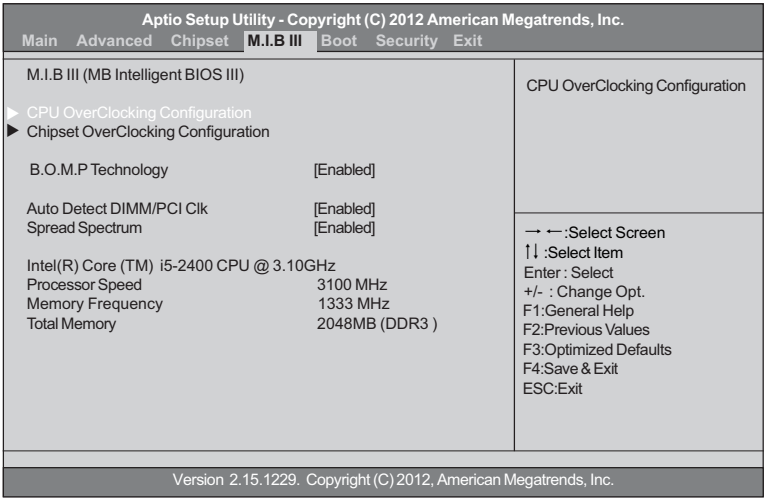
ME FW Version (8.1.0.1248)

This item shows the ME version.

Press <Esc> to return to the chipset menu page.

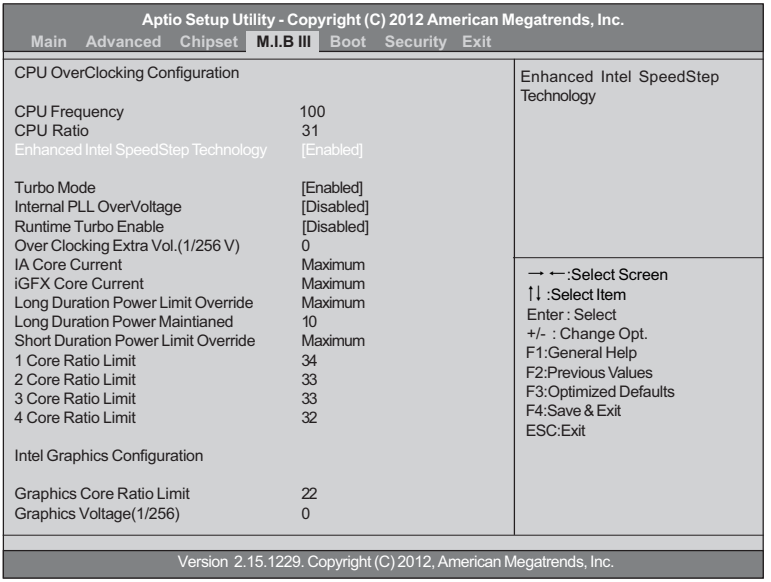
M.I.B III (MB Intelligent BIOS III) Menu

This page enables you to set the clock speed and system bus for your system. The clock speed and system bus are determined by the kind of processor you have installed in your system.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
M.I.B III (MB Intelligent BIOS III)
▶ CPU OverClocking Configuration
▶ Chipset OverClocking Configuration
B.O.M.P Technology [Enabled]
Auto Detect DIMM/PCI Clk [Enabled]
Spread Spectrum [Enabled]
Intel(R) Core (TM) i5-2400 CPU @ 3.10GHz
Processor Speed 3100 MHz
Memory Frequency 1333 MHz
Total Memory 2048MB (DDR3)
CPU OverClocking Configuration
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

▶CPU OverClocking Configuration

Scroll to this item to view the following screen:


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
CPU OverClocking Configuration
CPU Frequency 100
CPU Ratio 31
Enhanced Intel SpeedStep Technology [Enabled]
Turbo Mode [Enabled]
Internal PLL OverVoltage [Disabled]
Runtime Turbo Enable [Disabled]
Over Clocking Extra Vol.(1/256 V) 0
IA Core Current Maximum
iGFX Core Current Maximum
Long Duration Power Limit Override Maximum
Long Duration Power Maintianed 10
Short Duration Power Limit Override Maximum
1 Core Ratio Limit 34
2 Core Ratio Limit 33
3 Core Ratio Limit 33
4 Core Ratio Limit 32
Intel Graphics Configuration
Graphics Core Ratio Limit 22
Graphics Voltage(1/256) 0
Enhanced Intel SpeedStep Technology
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
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CPU Frequency (100)

This item shows the information of the CPU frequency.

CPU Ratio (31)

This item allows users to control non turbo CPU ratio.

Enhanced Intel SpeedStep Technology (Enabled)

This item allows users to enable or disable the EIST(Enhanced Intel SpeedStep Technology).

Turbo Mode (Enabled)

This item allows you to control the Intel Turbo Boost Technology.

Internal PLL OverVoltage (Disabled)

This item allows you to control the Internal PLL OverVoltage.

Runtime Turbo Enable (Disabled)

This item shows if CPU support runtime turbo or not.

Over Clocking Extra Vol.(1/256 V) (0)

Use this item to set over clocking extra voltage.

IA Core Current (Maximum)

Use this item to control CPU Current Limit.

iGFX Core Current (Maximum)

Use this item to control iGFX Core Current Limit.

Long Duration Power Limit Override (Maximum)

Intel(R) Turbo Boost Technology will use this power limit during the long duration power limit time window.

Long Duration Maintained (10)

Use this item to control the time window over PL1 value should be maintained. This is for Turbo mode.

Short Duration Power Limit Override (Maximum)

Intel(R) Turbo Boost Technology will use this power limit for a very short duration. After that, the long duration power limit will be honored.

1/2/3/4 Core Ratio Limit (34/33/33/32)

These items show the Core Ratio Limit value.

Graphics Core Ratio Limit (22)

This item allows you to control the internal GFX Turbo ratio.

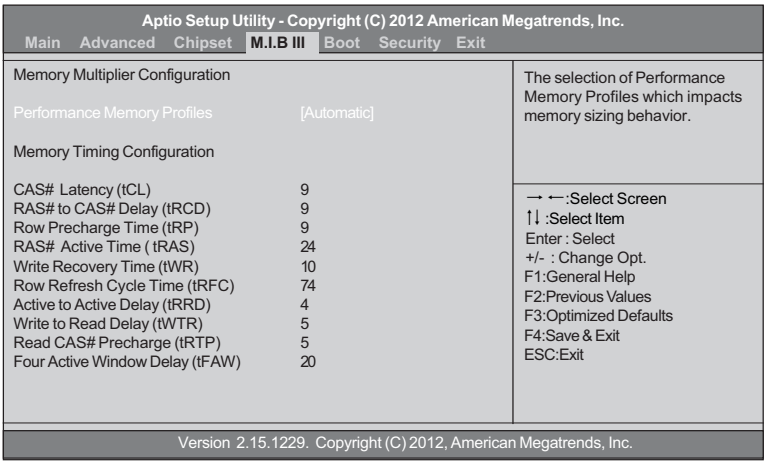
Graphics Voltage(1/256) (0)

This item allows you to adjust the internal GFX voltage.

Press <Esc> to return to the M.I.B III menu page.

►Chipset OverClocking Configuration

Scroll to this item to view the following screen:


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
Memory Multiplier Configuration
Performance Memory Profiles [Automatic]
Memory Timing Configuration
CAS# Latency (tCL) 9
RAS# to CAS# Delay (tRCD) 9
Row Precharge Time (tRP) 9
RAS# Active Time (tRAS) 24
Write Recovery Time (tWR) 10
Row Refresh Cycle Time (tRFC) 74
Active to Active Delay (tRRD) 4
Write to Read Delay (tWTR) 5
Read CAS# Precharge (tRTP) 5
Four Active Window Delay (tFAW) 20
The selection of Performance Memory Profiles which impacts memory sizing behavior.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

Performance Memory Profiles (Automatic)

This item enables you to set the Performance Memory Profile.

CAS Latency (tCL) (9)

This item determines the operation of DDR SDRAM memory CAS (colulmn address strobe). It is recommended that you leave this item at the default value. The 2T setting requires faster memory that specifically supports this mode.

RAS# to CAS# Delay (tRCD) (9)

This item specifies the RAS# to CAS# delay to Rd/Wr command to the same bank.

Row Precharge Time (tRP) (9)

This item specifies Row precharge to Active or Auto-Refresh of the same bank.

RAS# Active Time (tRAS) (24)

This item specifies the RAS# active time.

Write Recovery Time (tWR) (10)

This item specifies the write recovery time.

Row Refresh Cycle Time (tRFC) (74)

This item specifies the row refresh cycle time.

Active to Active Delay (tRRDmin) (4)

This item controls the ACTIVE bank x to ACTIVE bank y in memory clock cycles.

Write to Read Delay (twTR) (5)

This item specifies the write to read delay time.

Read CAS# Precharge (tRTP) (5)

This item controls the Read to PRECHARGE delay for memory devices, in memory clock cycles.

Four Active Window Delay (tFAW) (20)

This item controls the four bank activate time in memory clock cycles.

Press <Esc> to return to the M.I.B III menu page.

B.O.M.P Technology (Enabled)

This item allows users to enable or disable B.O.M.P technology. This function can run safe setting to setup menu when system boot fail 3 times.

Auto Detect DIMM/PCI Clk (Enabled)

When this item is enabled, BIOS will disable the clock signal of free DIMM/PCI slots.

Spread Spectrum (Enabled)

If you enable spread spectrum, it can significantly reduce the EMI (Electro-Magnetic Interference) generated by the system.

Intel(R) Core (TM) i5-2400 CPU @ 3.10GHz

This is display-only field and displays the information of the CPU installed in your computer.

Processor Speed (3100 MHz)

This item shows the CPU speed.

Memory Frequency (1333MHz)

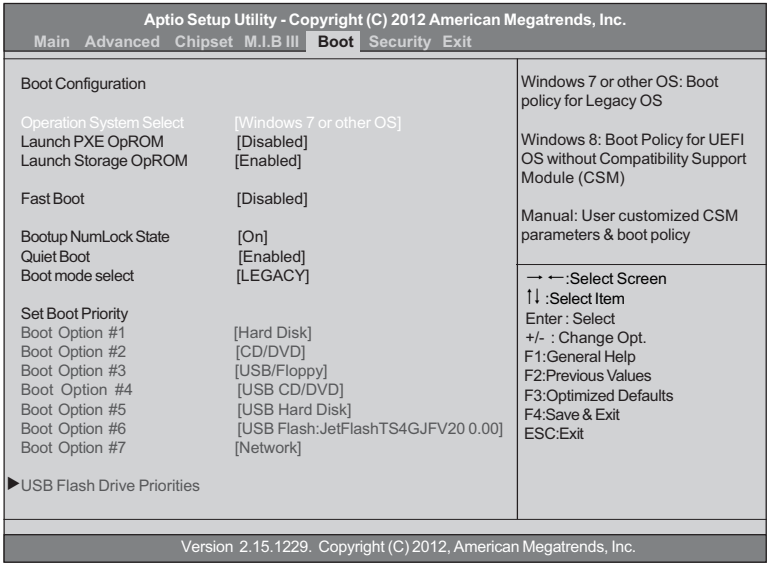
This item shows the momery frequency.

Total Memory (2048MB(DDR3))

This item shows the total momery of DDR3.

Boot Menu

This page enables you to set the boot device priority.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Boot Security Exit
Boot Configuration
Operation System Select [Windows 7 or other OS]
Launch PXE OpROM [Disabled]
Launch Storage OpROM [Enabled]
Fast Boot [Disabled]
Bootup NumLock State [On]
Quiet Boot [Enabled]
Boot mode select [LEGACY]
Set Boot Priority
Boot Option #1 [Hard Disk]
Boot Option #2 [CD/DVD]
Boot Option #3 [USB/Floppy]
Boot Option #4 [USB CD/DVD]
Boot Option #5 [USB Hard Disk]
Boot Option #6 [USB Flash:JetFlashTS4GJFV20 0.00]
Boot Option #7 [Network]
▶USB Flash Drive Priorities
Windows 7 or other OS: Boot policy for Legacy OS
Windows 8: Boot Policy for UEFI OS without Compatibility Support Module (CSM)
Manual: User customized CSM parameters & boot policy
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1229. Copyright (C) 2012, American Megatrends, Inc.

Boot Configuration

This item shows the information of the boot configuration.

Operation System Select (Windows7 or other OS)

This item is used to select the operation system.

Launch PXE OpROM (Disabled)

Use this item to enable or disable the PXE OpROM.

Launch Storage OpROM (Enabled)

Use this item to enable or disable the Storage OpROM.

Fast Boot (Disabled)

Use this item to enable or disable the fast boot.

Bootup NumLock State (On)

This item determines if the NumLock key is active or inactive at system start-up time.

Quiet Boot (Enabled)

This item determines if the NumLock key is active or inactive at system start-up time.

Boot mode select (LEGACY)

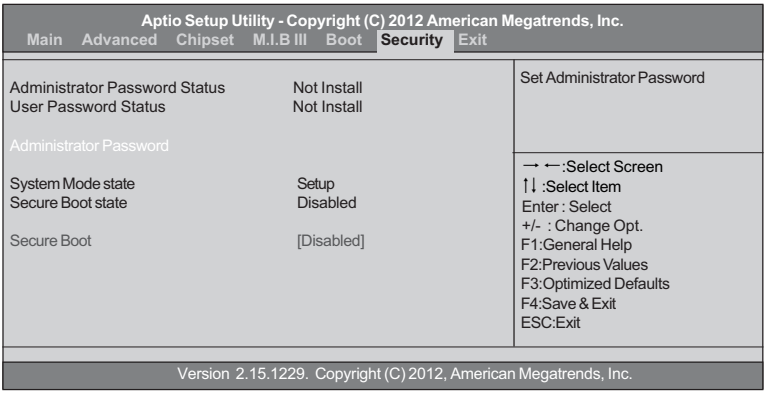
Use this item to select boot mode.

Boot Option #1/#2/#3/#4/#5/#6/#7/ (Hard Disk / CD/DVD / USB/Floppy / USB CD/DVD / USB HardDisk / USB Flash / Network)

These items show the boot priorities.

Security Menu

This page enables you to set setup administrator and password.



Administrator Password

This item allows you to set up the administrator password.

User Password Status

This item shows the status of the user password.

System Mode state (Setup)

This item shows system mode setup or not.

Secure Boot state (Disabled)

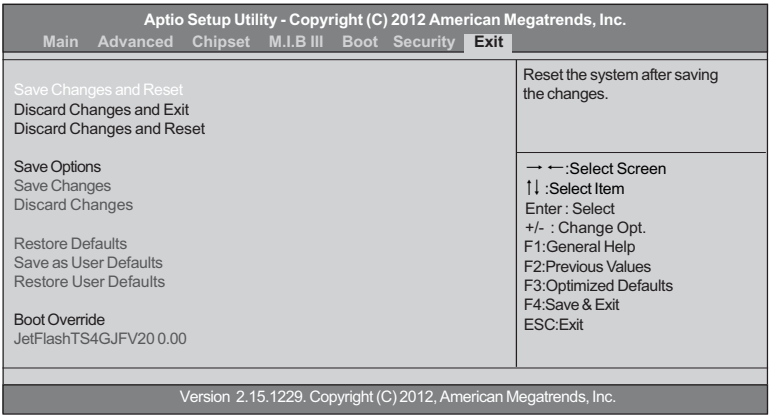
This item allows you to enable or disable the secure boot state.

Secure Boot (Disabled)

This item is used to control the secure boot flow, it is possible only if system runs in User Mode.

Exit Menu

This page enables you to exit system setup after saving or without saving the changes.



Save Changes and Reset

This item enables you to save the changes that you have made and reset.

Discard Changes and Exit

This item enables you to discard any changes that you have made and exit.

Discard Changes and Reset

This item enables you to discard any changes that you have made and reset.

Save Options

This item enables you to save the options that you have made.

Save Changes

This item enables you to save the changes that you have made.

Discard Changes

This item enables you to discard any changes that you have made.

Restore Defaults

This item enables you to restore the system defaults.

Save as User Defaults

This item enables you to save the changes that you have made as user defaults.

Restore User Defaults

This item enables you to restore user defaults.

Boot Override

Use this item to select the boot device.

Updating the BIOS

You can download and install updated BIOS for this motherboard from the manufacturer's Web site. New BIOS provides support for new peripherals, improvements in performance, or fixes for known bugs. Install new BIOS as follows:

1 If your motherboard has a BIOS protection jumper, change the setting to allow BIOS flashing.

2 If your motherboard has an item called Firmware Write Protect in Advanced BIOS features, disable it. (Firmware Write Protect prevents BIOS from being overwritten.)

3 Prepare a bootable device or create a bootable system disk. (Refer to Windows online help for information on creating a bootable system disk.)

4 Download the Flash Utility and new BIOS file from the manufacturer's Web site. Copy these files to the bootable device.

5 Turn off your computer and insert the bootable device in your computer. (You might need to run the Setup Utility and change the boot priority items on the Advanced BIOS Features Setup page, to force your computer to boot from the bootable device first.)

6 At the C:\ or A:\ prompt, type the Flash Utility program name and the file name of the new BIOS and then press <Enter>. Example: AFUDOS.EXE 040706.ROM

7 When the installation is complete, remove the bootable device from the computer and restart your computer. If your motherboard has a Flash BIOS jumper, reset the jumper to protect the newly installed BIOS from being overwritten. The computer will restart automatically.

This concludes Chapter 3. Refer to the next chapter for information on the software supplied with the motherboard.

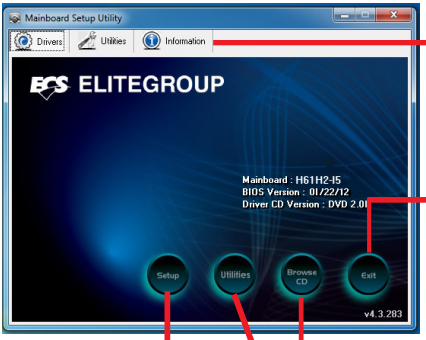
Memo

Chapter 3

Using the Motherboard Software

Auto-installing under Windows XP/7/8

The auto-install DVD-ROM makes it easy for you to install the drivers and software. The support software DVD-ROM disc loads automatically under Windows XP/7/8. When you insert the DVD-ROM disc in the DVD-ROM drive, the auto-run feature will automatically bring up the installation screen. The screen has four buttons on it: **Setup**, **Utilities**, **Browse CD** and **Exit**.



Information:
Displays the path for all software and drivers available on the disk.

Click "**Exit**" button to close the Auto-Setup window.

Browse CD:
Open Windows Explorer and show the contents of the support disk.

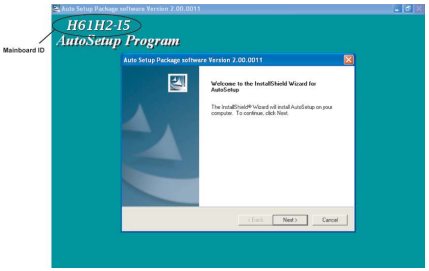
Click the "**Setup**" button to select and run the software installation program.

Click the "**Utilities**" button to select and install ECS Intelligent Utility.

Running Setup

Follow these instructions to install device drivers and software for the motherboard:

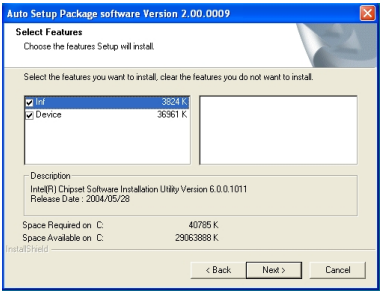
1. Click **Setup**. The installation program begins:



The following screens are examples only. The screens and driver lists will be different according to the motherboard you are installing.

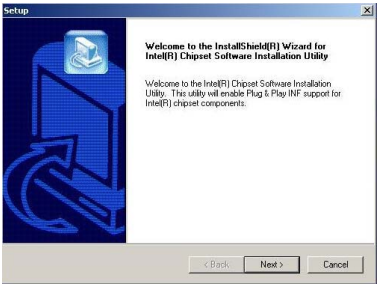
The motherboard identification is located in the upper left-hand corner.

2. Click **Next.** The following screen appears:


Auto Setup Package software Version 2.00.0009
Select Features
Choose the features Setup will install.
Select the features you want to install, clear the features you do not want to install.
Inf 3824 K
Device 36961 K
Description
Intel(R) Chipset Software Installation Utility Version 6.0.0.1011
Release Date : 2004/05/28
Space Required on C: 40785 K
Space Available on C: 29063888 K
InstallShield
< Back
Next >
Cancel

3. Check the box next to the items you want to install. The default options are recommended.

4. Click **Next** to run the Installation Wizard. An item installation screen appears:

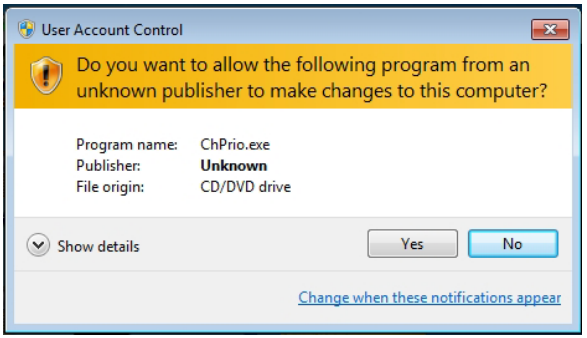

Setup
Welcome to the InstallShield(R) Wizard for Intel(R) Chipset Software Installation Utility
Welcome to the Intel(R) Chipset Software Installation Utility. This utility will enable Plug & Play INF support for Intel(R) chipset components.
< Back
Next >
Cancel

5. Follow the instructions on the screen to install the items.

Drivers and software are automatically installed in sequence. Follow the onscreen instructions, confirm commands and allow the computer to re-start a few times to complete the installation.

Windows 8 will show the following screen after system restart, you must select "Desktop" in the bottom left to install the next driver.

Windows 7/8 will appear below UAC (User Account Control) message after the system restart. You must select "Yes" to install the next driver. Continue this process to complete the drivers installation.


User Account Control
Do you want to allow the following program from an unknown publisher to make changes to this computer?
Program name: ChPrio.exe
Publisher: Unknown
File origin: CD/DVD drive
Show details
Yes
No
Change when these notifications appear

Manual Installation

If the auto-install DVD-ROM does not work on your system, you can still install drivers through the file manager for your OS (for example, Windows Explorer). Look for the chipset and motherboard model, and then browse to the directory and path to begin installing the drivers. Most drivers have a setup program (SETUP.EXE) that automatically detects your operating system before installation. Other drivers have the setup program located in the operating system subfolder.

If the driver you want to install does not have a setup program, browse to the operating system subfolder and locate the readme text file (README.TXT or README.DOC) for information on installing the driver or software for your operating system.

ECS Utility Software (Intelligent EZ Utility)

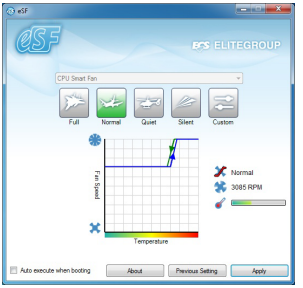
ECS Intelligent EZ Utility provides friendly interfaces under Windows O.S, which makes your computing more easily and conveniently.

These software(s) are subject to change at anytime without prior notice. Please refer to the support disk for available software.

eSF

eSF(Smart Fan) utility provides easy and safe way to adjust fan speed in accordance with your PC's system loading and temperature.

It has five modes to adjust fan speed in a safe range without entering the BIOS to optimize your system cooling environment.

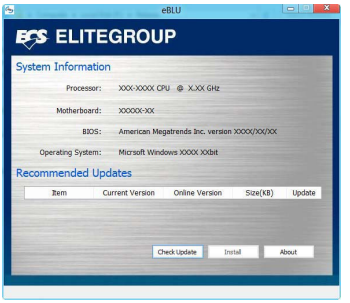


eDLU

ECS eDLU utility makes updating drivers fast and easy. eDLU saves time and hassle by listing all the latest drivers online. Just select the one you prefer and start to download and install the drivers.

eBLU

ECS eBLU utility makes BIOS update faster and easier. eBLU will list the latest BIOS with a default check-mark. Click"install" button to install.



Chapter 4

Trouble Shooting

Start up problems during assembly

After assembling the PC for the first time you may experience some start up problems. Before calling for technical support or returning for warranty, this chapter may help to address some of the common questions using some basic troubleshooting tips. You may also log onto our ECS website for more information:
http:// www.ecs.com.tw/ECSWebSite/Support/Support_FAQ.aspx?MenuID=49&childid=M 49&LanID=0

a) System does not power up and the fans are not running.

1. Disassemble the PC to remove the VGA adaptor card, DDR memory, LAN, USB and other peripherals including keyboard and mouse. Leave only the motherboard, CPU with CPU cooler and power supply connected. Make sure the power cord is plugged into the wall socket & the switch on the Power Supply Unit (PSU) is turned " on " as well. Turn on again to see if the CPU and power supply fans are running.

2. Make sure to remove any unused screws or other metal objects such as screwdrivers from the inside PC case. This is to prevent damage from short circuit.

3. Check the CPU FAN connector is connected to the motherboard.

4. For Intel platforms check the pins on the CPU socket for damage or bent. A bent pin may cause failure to boot and sometimes permanent damage from short circuit.

5. Check the 12V power connector is connected to the motherboard.

6. Check that the 12V power & ATX connectors are fully inserted into the motherboard connectors. Make sure the latches of the cable and connector are locked into place.

b) Power is on, fans are running but there is no display

1. Make sure the monitor is turned on and the monitor cable is properly connected to the PC.

2. Check the VGA adapter card (if applicable) is inserted properly.

3. Listen for beep sounds. If you are using internal PC speaker make sure it is connected.
   a. continuous 3 short beeps: memory not detected
   b. 1 long beep and 8 short beeps: VGA not detected

c) The PC suddenly shuts down while booting up.

1. The CPU may experience overheating so it will shutdown to protect itself. Apply the thermal grease onto the CPU heatsink & ensure the CPU fan is well-connected with the CPU heatsink. Check if the CPU fan is working properly while the system is running.

2. From the BIOS setting, try to disable the Smartfan function to let the fan run at default speed. Doing a Load Optimised Default will also disable the Smartfan.

Start up problems after prolong use

After a prolong period of use your PC may experience start up problems again. This may be caused by breakdown of devices connected to the motherboard such as HDD, CPU fan, etc. The following tips may help to revive the PC or identify the cause of failure.

1. Clear the CMOS values using the CLR_CMOS jumper. Refer to CLR_CMOS jumper in Chapter 2 for Checking Jumper Settings in this user manual. When completed, follow up with a Load Optimised Default in the BIOS setup.

2. Check the CPU cooler fan for dust. Long term accumulation of dust will reduce its effectiveness to cool the processor. Clean the cooler or replace a new one if necessary.

3. Check that the 12V power & ATX connectors are fully inserted into the motherboard connectors. Make sure the latches of the cable and connector are locked into place.

4. Remove the hard drive, optical drive or DDR memory to determine which of these components may be at fault.

5. Check whether there is any bulked up electrolytic capacitor or abnormal component.

Please logo onto our ECS website: http://www.ecs.com.tw/ECSWebSite/Support/Technical_Support_List.aspx?MenuID=50&LanID=0 for more information.

Maintenance and care tips

Your computer, like any electrical appliance, requires proper care and maintenance. Here are some basic PC care tips to help prolong the life of the motherboard and keep it running as best as it can.

1. Keep your computer in a well ventilated area. Leave some space between the PC and the wall for sufficient airflow.

2. Keep your computer in a cool dry place. Avoid dusty areas, direct sunlight and areas of high moisture content.

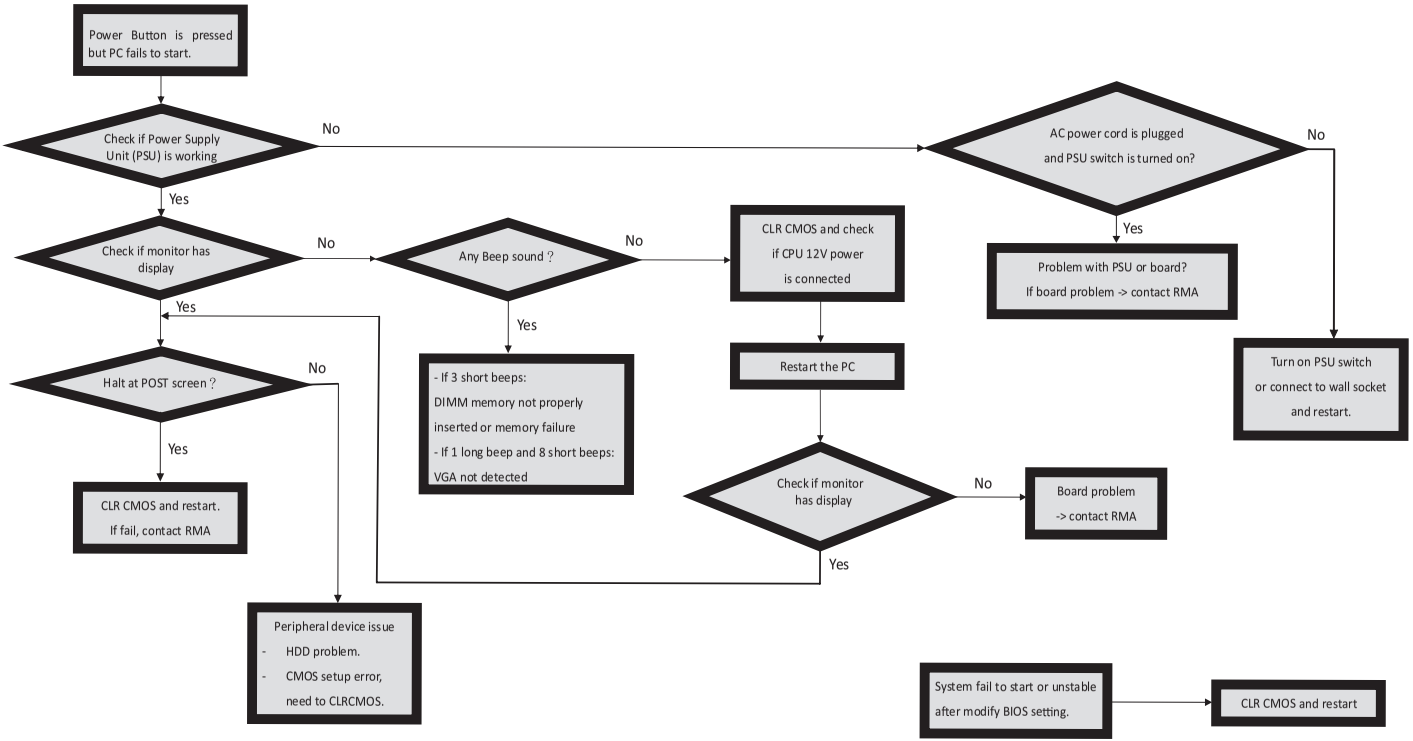
3. Routinely clean the CPU cooler fan to remove dust and hair.

4. In places of hot and humid weather you should turn on your computer once every other week to circulate the air and prevent damage from humidity.

5. Add more memory to your computer if possible. This not only speeds up the system but also reduces the loading of your hard drive to prolong its life span.

6. If possible, ensure the power cord has an earth ground pin directly from the wall outlet. This will reduce voltage fluctuation that may damage sensitive devices.

Basic Troubleshooting Flowchart


Power Button is pressed but PC fails to start.
Check if Power Supply Unit (PSU) is working
No
Yes
AC power cord is plugged and PSU switch is turned on?
No
Yes
Problem with PSU or board? If board problem -> contact RMA
Turn on PSU switch or connect to wall socket and restart.
Check if monitor has display
No
Yes
Any Beep sound ?
No
Yes
CLR CMOS and check if CPU 12V power is connected
Restart the PC
Check if monitor has display
No
Board problem -> contact RMA
Yes
- If 3 short beeps: DIMM memory not properly inserted or memory failure
- If 1 long beep and 8 short beeps: VGA not detected
Halt at POST screen ?
No
Yes
CLR CMOS and restart. If fail, contact RMA
Peripheral device issue
- HDD problem.
- CMOS setup error, need to CLRCMOS.
System fail to start or unstable after modify BIOS setting.
CLR CMOS and restart

Memo

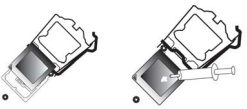
Hardware Installation Guide

Installation Steps

Step1. Installation of the CPU and CPU Cooler:

1-1. Pull up the lever away from the socket.

1-2. Align the CPU cut edge with the indented edge of the CPU socket. Gently place the CPU into correct position. Apply an even layer of thermal grease on the surface of CPU.

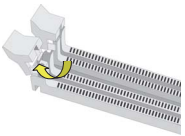


1-3. Rotate and press down the fastener of CPU fan to the motherboard through holes to install CPU fan into place.

1-4. Connect the CPU cooler power connector to the CPU_FAN connector.

Step2. Installation of Memory Modules:

2-1. Unfasten the latches on each side of the DIMM slots.



2-2. Firmly press the DIMM down until it seats correctly. Make sure the slot latches are levered upwards and latch on the edge of the DIMM.

Step3. Installation of Motherboard:

3-1. Replace the back I/O plate of the case with the I/O shield provided in motherboard's package.

3-2. Place the motherboard within the case by positioning it into the I/O plate. Secure the motherboard to the case with screws.

Step4. Installation of storage devices:

4-1. Please remove the front cover and 5.25'' plate from the case.

4-2. Place the storage devices (IDE/ SATA/FDD) in its position within the case and secure the device with screws.

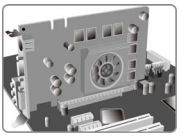
Step5. Case Preparation and Installation of Power Supply:

Remove both sides and the lid of the case, and then install the power supply with screws.

It is recommended to use a power supply delivering more than 300W of power. Insufficient power supply may cause unstable boot-up.

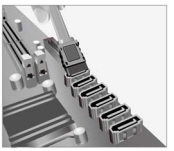
Step6. Installation of an Expansion card:

Remove the metal located on the slot and then insert the expansion card into the slot. Press the card firmly to make sure it is fully inserted into its slot. And then return the screw back to its position.



Step7. Connecting Cables and Power Connectors:

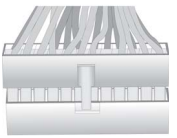
a. Connect the SATA hard drive to its SATA cable



b. Connect SATA power connector to the SATA device

c. Connect 24-pin power cable

Please note that when installing 24-pin power cable, the latches of power cable and the ATX connector match perfectly.

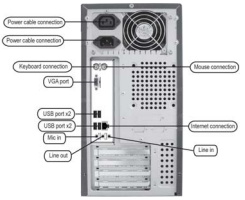


d. Connect 4-pin power cable

The ATX_12V 4-Pin power connector is used to provide power to the CPU. When installing 4-pin power cable, the latch of power cable matches the ATX_12V connector perfectly.

Step 8: Connecting ports on the case:

Once the steps above have been completed, please connect the peripherals such as the keyboard, mouse, monitor, etc. Then, connect the power and turn on the system. Please install all the required software.



Please install all peripheral devices.

8-1. Keyboard connection

8-2. Printer connection

8-3. Monitor connection

8-4. Speaker connection

8-5. Power connection

8-6. Mouse connection

To prevent component damage, do not power up the system until the installation is complete.

Using BIOS

The BIOS (Basic Input and Output System) Setup Utility displays the system's configuration status and provides you options to set system parameters. When you power on the system, BIOS enters the Power-On Self Test (POST) routines, please ***press <DEL> or F2 to enter setup***. When powering on for the first time, the POST screen may show a ***"CMOS Settings Wrong"*** message. Please ***enter BIOS and choose "Load Default Settings"*** to reset the default CMOS values. (Changes to system hardware such as different CPU, memories, etc. may also trigger this message.)

BIOS Navigation Keys

KEY	FUNCTION
ESC	Exits the current menu
↑↓→←	Scrolls through the items on a menu
+/-	Modifies the selected field's values
Enter	Select
F1	General Help
F2	Previous Value
F3	Optimized Defaults
F4	Save & Exit

The sequence of installation may differ depending on the type of case and devices used.

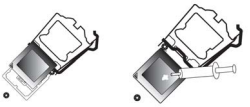
Manual de Instalação de Hardware

Etapas para instalação

Passo 1. Instalação da CPU e da CPU Refrigeração (Cooler):

1-1. Puxe a alavanca para fora do soquete.

1-2. Alinhe o lado da CPU com o lado correto do soquete do processador. Delicadamente, coloque o processador na posição correta. Aplique uma camada uniforme de pasta térmica na superfície da CPU.

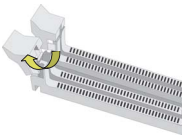


1-3. Gire e pressione para baixo a alavanca de fecho da ventoinha da CPU pelos orifícios da placa-mãe para instalar o ventilador da CPU no lugar.

1-4. Ligue o conector de alimentação à refrigeração da CPU ao conector CPU_FAN.

Passo 2. Instalação de módulos de memória:

2-1. Solte as travas em cada lado dos slots DIMM.



2-2. Pressione firmemente o módulo DIMM para baixo até que fique corretamente encaixado. Verifique se as travas do slot estão correctamente posicionadas e travam a extremidade do DIMM.

Passo 3. Instalação da Placa-mãe:

3-1. Mude a placa I/O que se encontra no gabinete pela placa de blindagem fornecida no pacote da placa-mãe.

3-2. Coloque a placa-mãe dentro do gabinete, posicionando-a no encaixe do I/O. Fixe a placa-mãe ao gabinte com parafusos.

Passo 4. Instalação de dispositivos de armazenamento:

4-1. Por favor, retire a tampa frontal e a placa 5,25'' do gabinete.

4-2. Colocar os dispositivos de armazenamento (IDE/ SATA /FDD) no interior do gabinete e fixar o dispositivo com parafusos.

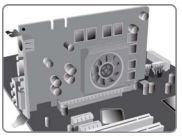
Passo 5. Processo de Preparação e Instalação da Alimentação do gabinete:

Remova ambos os lados e a tampa do gabinete e instale a fonte de alimentação com parafusos.

É recomendado o uso de uma fonte de alimentação que forneça mais de 300W de potência. Fornecimento de energia insuficiente poderá resultar em uma inicialização instável.

Passo 6. Instalação de uma placa de expansão:

Retire o metal localizado no slot e inserira a placa de expansão no slot. Pressione a placa firmemente para se certificar de que está completamente inserida na respectiva ranhura. Em seguida, coloque o parafuso para sua posição de origem.



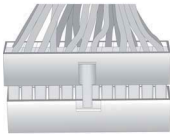
Passo 7. Conexão de cabos e conectores de alimentação:

a. Conecte o disco rígido SATA ao seu cabo SATA.

b. Ligue o conector de alimentação SATA ao dispositivo SATA.

c. Ligue o cabo de alimentação 24 pinos.

Por favor note que ao instalar o cabo de alimentação de 24 pinos, as travas do cabo de alimentação e o conector ATX encaixam perfeitamente.

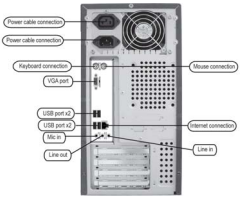


d. Ligue o cabo de alimentação de 4-pinos.

O conector de alimentação ATX_12V de 4-Pin é usado para fornecer energia para a CPU. Ao instalar o cabo de alimentação de 4pinos, as travas do cabo de alimentação correspondem perfeitamente ao conector ATX_12V.

Passo 8. Conectar dispositivos ao gabinete:

Após as etapas acima terem sido completadas, por favor conectar os periféricos como o teclado, o mouse, monitor, etc. Em seguida, conecte a alimentação e ligue o sistema. Por favor, instale todos os softwares necessários.



Por favor, instale todos os dispositivos periféricos.

8-1. Conexão de teclado

8-2. Conexão da impressora

8-3. Conexão do monitor

8-4. Ligação dos altofalantes

8-5. Conexão da alimentação

8-6. Conexão do mouse

Para evitar danos nos componentes, não ligar o sistema até que a instalação esteja completa.

Usando a BIOS

O Programa de Configuração da BIOS (Sistema Básico de Entrada e Saída) apresenta o estado da configuração do sistema e fornece opções para definir os parâmetros do sistema. Quando você liga o sistema, a BIOS entra nas rotinas Teste Autónomo de Alimentação (POST), por favor pressione <DEL> ou F2 para entrar no menu de configuração. Ao ligar pela primeira vez, a tela pode mostrar a mensagem de erro POST "CMOS Configuração Errada". Por favor, entre na BIOS e escolha "Carregar Configurações Padrão" para repor os valores CMOS padrão. (Alterações ao hardware do sistema, como uma CPU diferente, memórias, etc., também podem desencadear esta mensagem.)

Teclas de navegação da BIOS

TECLA	FUNÇÃO
ESC	Sair do menu atual
↑↓→←	Navega entre os itens de um menu
+/-	Modifica os valores do campo selecionado
Enter	Selecionar
F1	Ajuda Geral
F2	Valor anterior
F3	Padrões otimizados
F4	Salvar e Sair

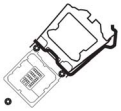
A sequência de instalação pode variar dependendo do tipo de caso e dos dispositivos utilizados.

हार्ड्वेयर स्थापना गाइड

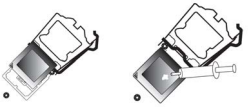
स्थापना के चरण

चरण 1. CPU और CPU कूलर स्थापित करना:

1-1. लीवर को सॉकेट में से खींचकर अलग करें.



1-2. CPU के नोकदार सिरे को CPU सॉकेट के दांतेदार सिरे से मिलाकर लगाएं. CPU को आहिस्ता से ठीक जगह पर बिठाएं. CPU की सतह पर थर्मल ग्रीस की एकसार परत लगाएं.

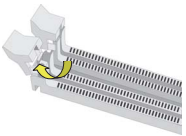


1-3. CPU के पंखे को उसकी जगह पर लगाने के लिए CPU के पंखे के फास्टनर को घुमाएं और उसे दबाकर मदरबोर्ड के आर-पार के छेदों में लगा दें.

1-4. CPU कूलर पॉवर कनेक्टर को CPU_FAN कनेक्टर से कनेक्ट करें.

चरण 2. मेमोरी मॉड्यूल स्थापित करना:

2-1. DIMM स्लॉट की प्रत्येक साइड पर लगे लैच खोल दें.



2-2. DIMM को मज़बूती से नीचे की ओर दबाएं जब तक वह अपनी जगह पर ठीक से न बैठ जाए. सुनिश्चित करें कि स्लॉट के लैच का रुख ऊपर की ओर रहता है और उन्हें DIMM के सिरे पर लैच किया जाता है.

चरण 3. मदरबोर्ड स्थापित करना:

3-1. केस की पिछली तरफ लगी I/O प्लेट को हटाकर उसकी जगह मदरबोर्ड के पैकेज में दी गई I/O शील्ड लगाएं.

3-2. मदरबोर्ड को I/O प्लेट में ठीक तरह से बिठाकर केस के भीतर रखें. मदरबोर्ड को पेच से केस में कस दें.

चरण 4. स्टोरेज डिवाइस स्थापित करना:

4-1. कृपया फ्रंट कवर और 5.25'' की प्लेट को केस से निकाल लें.

4-2. स्टोरेज डिवाइस (IDE/SATA/FDD) को केस में उसकी जगह पर रखें और डिवाइस को पेचों से कस दें.

चरण 5. केस तैयार करना और पॉवर सप्लाई स्थापित करना:

केस की दोनों साइड और उसका ढक्कन हटाएं, और फिर पॉवर सप्लाई को पेचों से स्थापित कर दें.

सिफारिश की जाती है कि 300W से अधिक पॉवर देने वाली पॉवर सप्लाई का इस्तेमाल करें. अपर्याप्त पॉवर सप्लाई से बूट-अप अस्थिर हो सकता है.

चरण 6. एक्सपैंशन कार्ड स्थापित करना:

स्लॉट पर लगी धातु हटाएं और फिर एक्सपैंशन कार्ड स्लॉट में लगा दें. कार्ड को मज़बूती से दबाएं ताकि सुनिश्चित हो सके कि यह अपने स्लॉट में ठीक तरह से लग गया है. और फिर पेच को वापस उसकी जगह पर लगा दें.

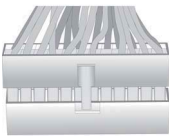
चरण 7. केबल और पॉवर कनेक्टर स्थापित करना:

क. SATA हार्ड ड्राइव को उसकी SATA केबल से कनेक्ट करें

ख. SATA पॉवर कनेक्टर को SATA डिवाइस से कनेक्ट करें

ग. 24-पिन पॉवर केबल कनेक्ट करें

कृपया नोट करें कि 24-पिन पॉवर केबल लगाते समय, पॉवर केबल और ATX कनेक्टर के लैच बिल्कुल ठीक से मेल खाने चाहिए.

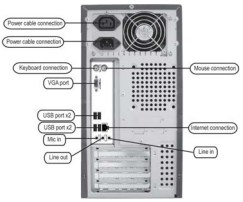


घ. 4-पिन पॉवर केबल कनेक्ट करें

CPU को पॉवर देने के लिए ATX_12V 4-पिन पॉवर कनेक्टर का उपयोग किया जाता है. 4-पिन पॉवर केबल स्थापित करते समय, पॉवर केबल का लैच ATX_12V कनेक्टर से बिल्कुल ठीक से मेल खाना चाहिए.

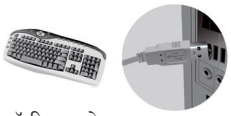
चरण 8. केस पर पोर्ट कनेक्ट करना:

उपर्युक्त चरण पूरे कर लेने के बाद, कृपया कीबोर्ड, माउस, मॉनीटर, आदि जैसे पेरफिरेल कनेक्ट करें. उसके बाद, पॉवर कनेक्ट करें और सिस्टम चालू करें. कृपया सभी आवश्यक सॉफ्टवेयर स्थापित करें.



कृपया सभी पेरफिरल डविाइस स्थापित करें.

8-1. कीबोर्ड कनेक्शन



8-2. प्रटिर कनेक्शन

8-3. मॉनीटर कनेक्शन

8-4. स्पीकर कनेक्शन

8-5. पॉवर कनेक्शन

8-6. माउस कनेक्शन

कंपोनेंट को क्षतसि बचाने के लिए, स्थापना पूरण न होने तक सिस्टम को पॉवर न दें.

BIOS का उपयोग करना

BIOS (बेसकि इनपुट और आउटपुट सिस्टम) सेटअप यूटीलटिी सिस्टम के कॉन्फ़गिरेशन की स्थतिि प्रदर्शति करती है और आपको सिस्टम के पैरामीटर सेट करने के वकिल्प उपलब्ध कराती है. जब आप सिस्टम की पॉवर ऑन करते हैं, तो BIOS पॉवर-ऑन सेल्फ़ टेस्ट (POST) रूटीन में प्रवेश करता है, कृपया सेटअप में जाने के लिए <DEL> या F2 दबाएं. पहली बार पॉवर चालू कए जाने पर, POST स्क्रीन "CMOS Settings Wrong" संदेश दखिा सकती है. डफ़िॉल्ट CMOS वैल्यू रीसेट करने के लिए कृपया BIOS में जाएं और "Load Default Settings" चुनें. (भन्नि CPU, मेमोरी, आदि जैसे सिस्टम हार्डवेयर में बदलाव करने पर भी यह संदेश आ सकता है.)

BIOS नेवगिशन कुंजियां

कुंजी	फंक्शन
ESC	वर्तमान मेनू से बाहर नकिलता है
↑↓→←	मेनू के आइटम में स्क्रॉल करता है
+/-	चुने गए फ़ील्ड की वैल्यू बदलता है
Enter	चुनें
F1	सामान्य मदद
F2	पछिली वैल्यू
F3	ऑप्टीमाइज़ुड डफ़िॉल्ट
F4	सहेजें व बाहर नकिलें

केस के प्रकार और उपयोग की जाने वाली डविाइस के अनुसार स्थापना का क्रम अलग-अलग हो सकता है.

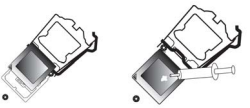
Guide d'installation matérielle

Etapes d'installation

Etape 1. Installation du CPU et du refroidisseur de CPU:

1-1. Ecartez le levier du socket.

1-2. Alignez le bord coupé du CPU avec le bord correspondant sur le socket du CPU. Placez soigneusement le CPU dans la bonne position. Appliquer une couche uniforme de pâte thermique sur la surface du CPU.

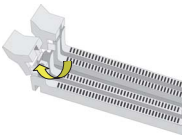


1-3. Tournez et appuyez sur la fixation du ventilateur du CPU contre la carte mère à travers les trous pour mettre en place le ventilateur du CPU.

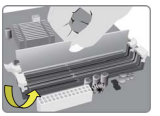
1-4. Branchez le connecteur d'alimentation du refroidisseur du CPU au connecteur CPU_FAN.

Etape 2. Installation des modules mémoire:

2-1. Libérez les loquets de chaque côté des logements DIMM.



2-2. Pressez fermement le module DIMM jusqu'à ce qu'il soit correctement installé. Assurez-vous que les loquets des logements sont soulevés et accrochés sur le bord de la DIMM.



Etape 3. Installation de la carte mère:

3-1. Replacez la plaque E/S arrière du boîtier avec le blindage E/S fourni dans l'emballage de la carte mère.

3-2. Placez la carte mère dans le boîtier en la positionnant dans la plaque E/S. Fixez la carte mère au boîtier avec les vis.

Etape 4. Installation des périphériques de stockage:

4-1. Retirez le capot avant et la plaque de 5,25'' du boîtier.

4-2. Placez les périphériques de stockage (IDE/SATA/FDD) à l'intérieur du boîtier et fixez-les avec des vis.

Etape 5. Préparation du boîtier et installation de l'alimentation:

Retirez les deux côtés et le couvercle du boîtier, puis installez l'alimentation avec des vis.

Il est recommandé d'utiliser une alimentation délivrant une puissance de plus de 300W. Une alimentation insuffisante peut entraîner une instabilité de démarrage.

Etape 6. Installation d'une carte d'extension:

Retirez le métal situé sur le logement et insérez la carte d'extension dans le logement. Appuyez fermement sur la carte pour vous assurer qu'elle est complètement insérée dans le logement. Remettez ensuite la vis en place.

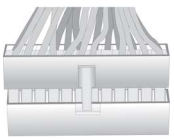
Etape 7. Connexion des câbles et des connecteurs d'alimentation:

a. Connectez le disque dur SATA à son câble SATA

b. Branchez le connecteur d'alimentation SATA au périphérique SATA

c. Connectez le câble d'alimentation 24 broches

Notez que lors de l'installation du câble d'alimentation 24 broches, les loquets du câble d'alimentation et le connecteur ATX correspondent parfaitement.

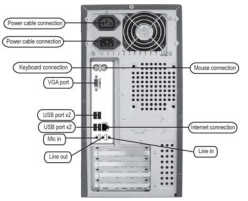


d. Connectez le câble d'alimentation 4 broches

Le connecteur d'alimentation 4 broches ATX_12V est utilisé pour alimenter le CPU. Lors de l'installation du câble d'alimentation 4 broches, le loquet du câble d'alimentation correspond parfaitement au connecteur ATX_12V.

Étape 8. Connexion des ports au boîtier:

Une fois que les étapes ci-dessus ont été effectuées, connectez les périphériques tels que le clavier, la souris, le moniteur, etc. Puis, connectez l'alimentation et allumez le système. Installez tous les logiciels requis.



Installez tous les périphériques.

8-1. Connexion du clavier

8-2. Connexion de l'imprimante

8-3. Connexion du moniteur

8-4. Connexion des haut-parleurs

8-5. Connexion de l'alimentation

8-6. Connexion de la souris

Pour éviter d'endommager les composants, n'allumez pas le système avant d'avoir terminé l'installation.

Utilisation du BIOS

L'utilitaire d'installation BIOS (Basic Input and Output System) affiche l'état de la configuration du système et vous offre des options vous permettant de définir les paramètres du système. Quand vous allumez le système, le BIOS entre dans les routines du POST (Power-On Self Test), appuyez sur <SUPPR> ou F2 pour entrer dans l'utilitaire d'installation. Lors de la première mise sous tension, l'écran du POST peut afficher le message "CMOS Settings Wrong" (Paramètres CMOS erronés) Accédez au BIOS et choisissez "Load Default Settings"(Charger les paramètres par défaut)pour réinitialiser les valeurs CMOS par défaut. (Les modifications apportées au matériel du système tels que différents CPU, mémoires, etc. peuvent également déclencher ce message.)

Touches de navigation du BIOS

TOUCHE	FONCTION
ECHAP	Quitte le menu actuel
↑↓→←	Parcourt les éléments d'un menu
+/-	Modifie les valeurs des champs sélectionnés
Entrée	Sélectionner
F1	Aide Générale
F2	Valeur précédente
F3	Valeurs par défaut optimisées
F4	Enregistrer & Quitter

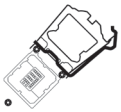
La séquence d'installation peut changer selon le type de boîtier et les périphériques utilisés.

Hardware Installationsanleitung

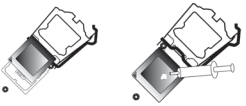
Installationsschritte

Schritt 1. Installation der CPU und des CPU-Kühlers:

1-1. Lösen Sie den Hebel vom CPU-Sockel.



1-2. Entfernen Sie eventuell die Kunststoffabdeckung und richten Sie die Kerbe der CPU mit der entsprechenden Stelle des CPU-Sockels aus. Legen Sie die CPU vorsichtig in die korrekte Position. Tragen Sie eine erbsengroße Menge der Wärmeleitpaste in der Mitte der glatten Oberfläche der CPU auf.

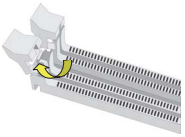


1-3. Lösen Sie durch eine Drehung die Pushpins des CPU-Kühlers und richten Sie diese mit den entsprechenden Löchern neben dem CPU-Sockel auf der Hauptplatine aus und drücken Sie die Pushpins nach unten bis sie einrasten.

1-4. Stecken Sie die Anschlussleitung des CPU-Kühlers in den „CPU_FAN“-Anschluss auf der Hauptplatine.

Schritt 2. Installation der Speichermodule:

2-1. Lösen Sie die Verriegelungen an beiden Seiten der DIMM-Steckplätze.



2-2. Drücken Sie das DIMM-Speichermodul vorsichtig aber fest nach unten, bis es richtig sitzt. Drücken Sie die Verriegelungen an den Seiten des Speichermoduls nach oben und prüfen Sie, ob diese im DIMM-Speichermodul richtig eingerastet sind.

Schritt 3. Installation der Hauptplatine:

3-1. Entfernen Sie die rückseitige ATX-Blende (I/O-Schild) des Gehäuses und verwenden Sie die ATX-Blende, die mit der Hauptplatine mitgeliefert wurde.

3-2. Richten Sie die Anschlussseite der Hauptplatine an den Anschluss-Löchern der ATX-Blende im Gehäuse aus und platzieren Sie die Hauptplatine im Gehäuse. Befestigen Sie die Hauptplatine mit den Schrauben am Gehäuse.

Schritt 4. Installation von Speichergeräten:

4-1. Entfernen Sie bitte die vordere Abdeckung des Gehäuses und eine 5,25''-Abdeckung aus der vorderen Abdeckung des Gehäuses.

4-2. Installieren Sie die Speichergeräte (IDE/SATA-Wechseldatenträger-Laufwerk(e) /Diskettenlaufwerk), indem Sie diese in die entsprechenden Schächte hineinschieben und dann mit Schrauben befestigen.

Schritt 5. Vorbereitung zur Installation des Netzteils:

Entfernen Sie beide Seitenabdeckungen und den oberen Deckel des Gehäuses und platzieren Sie dann das Netzteil an der entsprechenden Stelle und befestigen Sie es mit Schrauben.

Es wird empfohlen, ein Netzteil mit einer Leistung von mehr als 300W zu verwenden. Ein Netzteil mit unzureichender Leistung kann ein fehlerhaftes Starten des Computers zur Folge haben.

Schritt 6. Installation einer Erweiterungskarte:

Entfernen Sie die entsprechende Slot-Blechabdeckung aus Metall hinten am Gehäuse, wo der zu verwendende Steckplatz sich befindet und stecken Sie die Erweiterungskarte in den Steckplatz. Prüfen Sie ob die Kontakte der Erweiterungskarte vollständig im Steckplatz eingeschoben sind. Befestigen Sie die Erweiterungskarte mit der Schraube mit der die Slot-Blechabdeckung befestigt war.

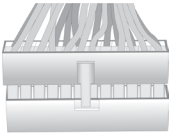
Schritt 7. Anschluss der Kabel und Stromversorgungsanschlüsse:

a. Schließen Sie das/die SATA-Kabel der SATA-Festplatte(n) und eventuell den Laufwerken auf der Hauptplatine an

b. Schließen Sie die SATA-Stromanschlusskabel an den SATA-Geräten an

c. Stecken Sie das 24-Pin-Stromversorgungskabel in den entsprechenden Anschluss auf der Hauptplatine

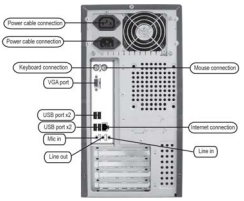
Beachten Sie dabei bitte, dass die Lasche auf der einen Seite des 24-Pin-Stromversorgungskabels am ATX-Anschluss auf der Hauptplatine eingerastet ist.



d. Stecken Sie das 4-Pin-Stromversorgungskabel in den entsprechenden Anschluss auf der Hauptplatine

Der ATX_12V 4-Pin-Anschluss versorgt die CPU mit Strom. Beachten Sie dabei bitte, dass die Lasche auf der einen Seite des 4-Pin-Stromversorgungskabels am ATX-Anschluss auf der Hauptplatine eingerastet ist.

Schritt 8: Anschließen weiterer Geräte:



Sobald Sie die oben genannten Schritte abgeschlossen haben, können Sie die Peripheriegeräte wie etwa Tastatur, Maus, Monitor, usw. anschließen. Stecken Sie dann das eine Ende des Netzkabels hinten in das Netzteil und das andere Ende in eine Steckdose. Nach Anschluss der unten genannten Peripheriegeräte können Sie die benötigte Software installieren.

Installieren Sie nun die Peripheriegeräte.

8-1. Tastatur-Anschluss

8-2. Drucker-Anschluss

8-3. Monitor-Anschluss

8-4. Lautsprecheranschluss

8-5. Netzkabelanschluss

8-6. Maus-Anschluss

Um Schäden an den Komponenten zu vermeiden, schalten Sie bitte den Computer nicht ein, bevor die Peripheriegeräte angeschlossen sind.

Verwendung des BIOS

Das BIOS (Basic Input und Output System) Einrichtungsprogramm zeigt die momentane Konfiguration der Hauptplatine an und ermöglicht die Änderung einiger Werte bzw. Einstellungen. Wenn Sie den Computer einschalten, durchläuft das BIOS den sogenannten Power-On Self Test (POST), d.h. einen Selbsttest; um zu den Einstellmöglichkeiten zu gelangen, *drücken Sie bitte die „Entf"-Taste oder die F2-Taste*. Wenn Sie den Computer zum ersten Mal einschalten, wird eventuell die Meldung „CMOS Settings Wrong" angezeigt. Zur Abhilfe, drücken Sie bitte wie oben angegeben die entsprechende Taste, um zu den Einstellmöglichkeiten zu gelangen, *suchen Sie die Einstellmöglichkeit "Load Default Settings"*, und markieren Sie diese und speichern Sie die Einstellungen mit "Save and Exit". (Änderungen an der-Hardware, wie z.B. eine andere CPU, anderer Arbeitsspeicher, usw. können diese Meldung auch hervorrufen.)

BIOS Navigationstasten

TASTE	FUNKTION
ESC	Verlassen des aktuellen Menüs
↑↓→←	Scrollen durch die Funktionen/Einstellmöglichkeiten in einem Menü
+/-	Ändert den gerade hervorgehobenen Wert
Eingabe	Auswählen
F1	Allgemeine Hilfe
F2	Vorheriger Wert
F3	Optimierte Defaultwerte
F4	Speichern & Verlassen

Die Reihenfolge der Installation kann je nach Art des Gehäuses und der verwendeten Geräte variieren.

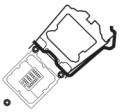
Deutsch

Руководство по установке оборудования

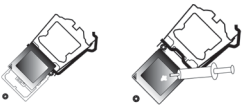
Этапы установки

Шаг1. Установка центрального процессора и кулера для центральногопроцессора:

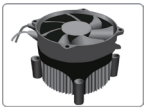
1-1. Потяните рычаг в сторону от сокета.



1-2. Выровняйте срезанный край ЦП с выступающим краем сокета процессора. Осторожно установите ЦП в правильное положение. Нанесите ровный слой термальной смазки на поверхность ЦП.



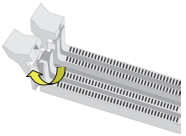
1-3. Поверните и прижмите зажим вентилятора ЦП к сквозным отверстиям на материнской плате, чтобы установить вентилятор ЦП на место.



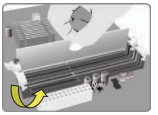
1-4. Подсоедините разъем питания кулера центрального процессора к коннестору CPU_FAN.

Шаг2. Установка модулей памяти:

2-1. Ослабьте защелки на каждой стороне DIMM-слотов.



2-2. Крепко надавите на DIMM-слот, пока он не будет правильно установлен. Убедитесь, что защелки слота подняты вверх и закреплены на краю DIMM-слота.



Шаг3. Установка материнской платы:

3-1. Замените плату ввода/вывода на блоке планкой портов ввода-вывода, входящей в комплект упаковки с материнской платой.

3-2. Поместите материнскую плату внутрь корпуса, совместив с платой ввода-вывода. Прикрепите материнскую плату к корпусу при помощи болтов.

Шаг4. Установка устройств памяти:

4-1. Снимите переднюю крышку и плату 5.25'' с корпуса.

4-2. Установите устройства памяти (IDE/SATA/FDD) на место внутри корпуса и закрепите их болтами.

Шаг5. Подготовка корпуса и установка блока питания:

Снимите обе боковые части и крышку корпуса, а затем установите блок питания и закрепите его при помощи болтов.

Рекомендуется использовать блок питания мощностью более 300 Вт. Недостаточная мощность источника питания может стать причиной нестабильной загрузки.

Шаг6. Установка карты расширения:

Удалите металлическую пластину, расположенную на слоте, а затем вставьте карту расширения в слот. Крепко надавите на карту, чтобы убедиться, что она полностью вставлена в слот. Затем установите болт на место.

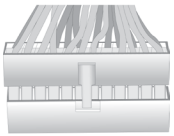
Шаг7. Подсоединение кабелей к разъемам питания:

а. Подсоедините жесткий диск SATA к кабелю SATA

б. Подсоедините силовой разъем SATA к устройству SATA

в. Подсоедините 24-контактный кабель питания

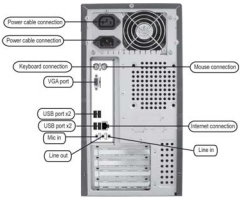
Обратите внимание, что при установке 24-контактного кабеля питания зажимы кабеля питания и разъема ATX должны точно совпадать.



г. Подсоедините 4-контактный кабель питания

Для подачи питания к ЦП используется 4-контактный силовой разъем ATX_12V. При установке 4-контактного кабеля питания зажим кабеля должен точно совпадать с разъемом ATX_12V.

Шаг 8. Соединение портов на корпусе:



После выполнения указанных выше шагов подключите периферийные устройства, такие как клавиатура, мышь, монитор и т.п. Затем подключите питание и включите систему. Установите все необходимое программное обеспечение.

Установите все периферийные устройства.

8-1. Подключение клавиатуры

8-2. Подключение принтера

8-3. Подключение монитора

8-4. Подключение динамиков

8-5. Подключение питания

8-6. Подключение мыши

Во избежание повреждения компонентов не включайте систему до полного завершения установки.

Использование BIOS

Программа установки BIOS (базовая система ввода-вывода) отображает состояние конфигурации системы и предоставляет опции для задания системных параметров. При включении системы BIOS вводит стандартные программы POST (самотестирование при включении питания), нажмите <DEL> или F2, чтобы начать установку. При включении питания в первый раз на экране POST может отобразиться сообщение “CMOS Settings Wrong” (Неправильные настройки CMOS). Введите BIOS и выберите “Load Default Settings” (Настройки по умолчанию), чтобы восстановить значения CMOS по умолчанию. (Изменения системного оборудования, например, другой центральный процессор, устройства памяти и пр., могут также стать причиной появления данного сообщения).

Навигационные клавиши BIOS

КЛАВИША	ФУНКЦИЯ
ESC	Выход из текущего меню
↑↓→←	Перемещение по элементам в меню
+/-	Изменение значений в выбранном поле
Enter	Выбор
F1	Общая справка
F2	Предыдущее значение
F3	Оптимизированные значения по умолчанию
F4	Сохранить и выйти

Последовательность установки может отличаться в зависимости от типа корпуса и используемых устройств.

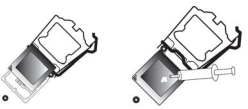
Guía de instalación del hardware

Pasos para realizar la instalación

Paso 1. Instalación de la CPU y sistema de refrigeración de la CPU:

1-1. Tire de la palanca hacia arriba, apartándola del zócalo.

1-2. Alinee el borde recortado de la CPU con el borde dentado del zócalo de la CPU. Coloque suavemente la CPU en la posición correcta. Aplique una capa uniforme de grasa térmica sobre la superficie de la CPU.

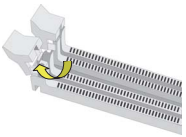


1-3. Gire y presione hacia abajo la sujeción del ventilador de la CPU, contra la placa base a través de los orificios, para instalar el ventilador de la CPU en su sitio.

1-4. Conecte el conector de alimentación del sistema de refrigeración de la CPU en el conector CPU_FAN (VENTILADOR_CPU).

Paso 2. Instalación de los módulos de memoria:

2-1. Suelte los pestillos a cada lado de las ranuras DIMM.



2-2. Presione con firmeza el DIMM hacia abajo hasta que asiente correctamente. Asegúrese de que los pestillos de la ranura esten levantados y traben los extremos del DIMM.

Step3. Installation of Motherboard:

3-1. Cambie la placa I/O trasera de la carcasa por la protección I/O proporcionada en el paquete de la placa base.

3-2. Coloque la placa base dentro de la carcasa colocándola en la placa I/O. Asegure la placa base a la carcasa con tornillos.

Paso 4. Instalación de los dispositivos de almacenamiento:

4-1. Quite la cubierta frontal y la placa de 5,25 pulg. de la carcasa.

4-2. Coloque los dispositivos de almacenamiento (IDE/SATA/FDD) en su lugar dentro de la carcasa y asegurelos con tornillos.

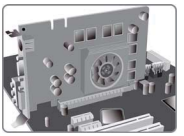
Paso 5. Preparación de la carcasa e instalación de la fuente de alimentación:

Quite ambos laterales y la tapa de la carcasa y, a continuación, instale la fuente de alimentación con tornillos.

Se recomienda utilizar una fuente de alimentación que proporcione más de 300W de potencia. Una alimentación insuficiente puede causar un arranque inestable.

Paso 6. Instalación de la tarjeta de expansión:

Quite el metal colocado en la ranura e inserte la tarjeta de expansión en la ranura. Presione con firmeza la tarjeta hasta que quede perfectamente introducida en la ranura. Después vuelva a poner el tornillo en su posición.



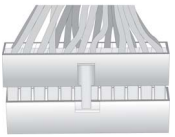
Paso 7. Conexión de los cables y los conectores de alimentación:

a. Conecte el disco duro SATA al cable SATA.

b. Conecte el conector de alimentación SATA al dispositivo SATA .

c. Conecte el cable de alimentación de 24 pines.

Tenga en cuenta, al instalar el cable de alimentación de 24 pines, que los pestillos del cable y del conector ATX deben encajar perfectamente.

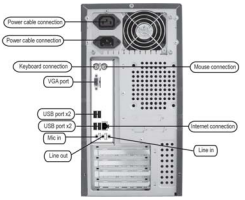


d. Conecte el cable de alimentación de 4 pines.

El conector de alimentación de 4 pines ATX_12 V se utiliza para proporcionar alimentación a la CPU. Cuando instale el cable de alimentación de 4 pines, el pestillo del cable debe encajar perfectamente con el conector ATX_12 V.

Paso 8. Conexión de los puertos en la carcasa:

Una vez completados los anteriores pasos, conecte los periféricos como el teclado, el mouse, monitor, etc. A continuación, conecte la alimentación y encienda el sistema. Instale todo el software necesario.



Instale todos los dispositivos periféricos.

8-1. Conexión del teclado

8-2. Conexión de la impresora

8-3. Conexión del monitor

8-4. Conexión de los altavoces

8-5. Conexión de la alimentación

8-6. Conexión del mouse

Para evitar daños en los componentes, no encienda el sistema hasta no haber finalizado la instalación.

Utilización de la BIOS

La aplicación de configuración BIOS (Sistema de entrada y salida básico) muestra el estado de configuración del sistema y proporciona las opciones para configurar los parámetros del sistema. Cuando enciende el sistema, la BIOS entra en las rutinas de Prueba automática en encendido (POST); presione <DEL>, <SUP> o F2 para entrar en modo configuración. Al encender por primera vez, la pantalla POST puede mostrar el mensaje "Configuración CMOS incorrecta". Entre en la BIOS y seleccione “Cargar parámetros predeterminados” para restaurar los valores CMOS predeterminados. (Los cambios en el hardware del sistema, como una CPU diferente, memorias diferentes, etc., pueden activar también este mensaje).

Teclas de navegación de la BIOS

Teclas	Función
ESC	Salir del menú actual
↑↓→←	Navegar por los diferentes elementos en un menú
+/-	Modificar los valores del campo seleccionado
Enter	Seleccionar
F1	Ayuda
F2	Valor anterior
F3	Configuración predeterminada optimizada
F4	Guardar y salir

La secuencia de instalación puede ser diferente dependiendo del tipo de carcasa y de los dispositivos utilizados.

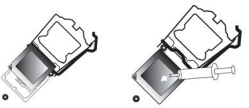
Panduan Pemasangan Perangkat Keras

Langkah-Langkah Pemasangan

Langkah 1. Pemasangan CPU dan Pendingin CPU:

1-1. Tarik tuas dari soket.

1-2. Luruskan tepi pemisah CPU dengan tepi bertakik dari soket CPU. Pasang CPU secara perlahan pada posisi yang tepat. Oleskan lapisan gemuk termal secara merata pada permukaan CPU.

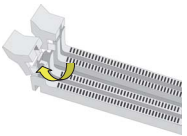


1-3. Putar dan tekan penahan kipas CPU ke lubang tembus motherboard untuk memasang kipas CPU pada tempatnya.

1-4. Sambungkan konektor daya pendingin CPU ke konektor CPU_FAN.

Langkah 2. Pemasangan Modul Memori:

2-1. Longgarkan kait pada setiap sisi slot DIMM.



2-2. Tekan kuat DIMM hingga terpasang dengan benar. Pastikan kait slot terpasang pada tuas atas dan kaitkan pada tepi DIMM.

Langkah 3. Pemasangan Motherboard:

3-1. Pasang kembali pelat I/O casing dengan pelindung I/O yang disediakan dalam paket motherboard.

3-2. Tempatkan motherboard pada casing dengan memosisikannya ke dalam pelat I/O. Kencangkan motherboard pada casing dengan sekrup.

Langkah 4. Pemasangan perangkat penyimpanan:

4-1. Harap lepaskan penutup depan dan pelat 5,25'' dari casing.

4-2. Pasang perangkat penyimpanan (IDE/SATA/ FDD) ke dalam posisinya di dalam casing dan kencangkan perangkat dengan sekrup.

Langkah 5. Menyiapkan Casing dan Pemasangan Catu Daya:

Lepaskan kedua sisi dan dan tutup casing, lalu pasang catu daya dengan sekrup.

Anda disarankan untuk menggunakan catu daya yang menyediakan daya lebih dari 300 W. Pasokan daya yang tidak memadai dapat mengakibatkan proses booting yang tidak stabil.

Langkah 6. Pemasangan kartu Ekspansi:

Lepaskan logam yang terletak pada slot lalu masukkan kartu ekspansi ke dalam slot. Tekan kartu dengan kencang untuk memastikan bahwa kartu telah masuk sepenuhnya ke dalam slot. Lalu pasang kembali sekrup ke dalam posisinya.

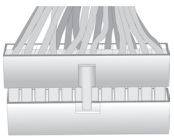
Langkah 7. Menyambungkan Kabel dan Konektor Daya:

a. Sambungkan hard drive SATA ke kabel SATA

b. Sambungkan konektor daya SATA ke perangkat SATA

c. Sambungkan kabel daya 24 pin

Perhatikan bahwa saat memasang kabel daya 24, kait pada kabel daya dan konektor ATX harus sesuai.

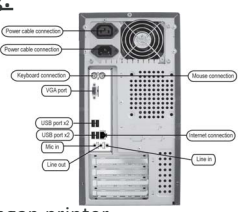


d. Sambungkan kabel daya 4 pin

Konektor daya ATX_12V 4 pin digunakan untuk menyediakan daya ke CPU. Saat memasang kabel daya 4 pin, kait kabel daya cocok dengan konektor ATX_12V.

Langkah 8. Menyambungkan port pada casing:

Setelah langkah-langkah di atas selesai, harap sambungkan peripheral seperti keyboard, mouse, monitor, dll. Lalu sambungkan daya dan nyalakan sistem. Harap pasang semua perangkat lunak yang dibutuhkan.



Harap pasang semua perangkat peripheral.

8-1. Sambungan keyboard

8-2. Sambungan printer

8-3. Sambungan monitor

8-4. Sambungan speaker

8-5. Sambungan daya

8-6. Sambungan mouse

Untuk mencegah kerusakan komponen, jangan nyalakan daya sebelum pemasangan selesai.

Menggunakan BIOS

Utulitas Pengaturan BIOS (Basic Input and Output System) menampilkan status konfigurasi sistem dan memberi Anda opsi untuk mengatur parameter sistem. Saat Anda menyalakan daya pada sistem, BIOS masuk ke rutinitas Power-On Self Test (POST), harap tekan <DEL> atau F2 untuk masuk ke pengaturan. Saat menyalakan untuk pertama kalinya, layar POST mungkin akan menunjukkan pesan "CMOS Settings Wrong" (Kesalahan Pengaturan CMOS). Harap masukkan BIOS dan tentukan "Load Default Settings" (Pengaturan Standar Beban) untuk menyetel kembali nilai CMOS standar. (Perubahan pada perangkat keras sistem seperti CPU, memori yang berbeda, dll. juga dapat memicu pesan ini.)

Tombol Navigasi BIOS

TOMBOL	FUNGSI
ESC	Keluar dari menu saat ini
↑↓→←	Menggulir antar pilihan pada menu
+/-	Mengubah nilai bidang yang dipilih
Enter	Pilih
F1	Bantuan Umum
F2	Nilai Sebelumnya
F3	Standar yang telah Dioptimalkan
F4	Simpan & Keluar

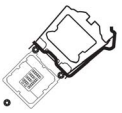
Urutan pemasangan mungkin berbeda bergantung pada jenis casing dan perangkat yang digunakan.

دليل تركيب المكونات الصلبة

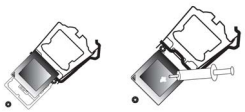
خطوات التركيب

الخطوة رقم 1. تركيب وحدة المعالجة المركزية ومبرد وحدة المعالجة المركزية:

1-1 اسحب الذراع لأعلى بعيدا عن المقبس.



1-2 قم بمحاذاة الطرف مشقوق وحدة المعالجة المركزية مع الطرف المسنن لمقبس وحدة المعالجة المركزية. ضع وحدة المعالجة المركزية برفق في الوضع الصحيح. ضع طبقة مستوية من المعجون الحراري على سطح وحدة المعالجة المركزية.

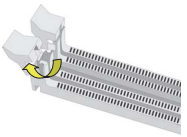


1-3 قم بالإدارة والضغط لأسفل على مشبك مروحة وحدة المعالجة المركزية في اللوحة الأم عبر الفتحات لتثبيت مروحة وحدة المعالجة المركزية في مكانها.

1-4 قم بتوصيل موصل طاقة مبرد وحدة المعالجة المركزية بموصل مروحة وحدة المعالجة المركزية (CPU_FAN).

الخطوة رقم 2. تركيب وحدات الذاكرة:

2-1 افتح الأقفال الموجودة على كل جانب من فتحات وحدة الذاكرة المتكاملة الثنائية (DIMM).



2-2 اضغط بقوة على وحدة الذاكرة الثنائية المتكاملة لأسفل حتى يتم تثبيتها بشكل صحيح. تأكد من رفع أقفال الفتحات لأعلى وقم بإغلاقها على حافة وحدة الذاكرة الثنائية المتكاملة.

الخطوة رقم 3. تركيب اللوحة الأم:

3-1 استبدل لوحة الإدخال/الإخراج الموجودة في الحاوية بدرع الإدخال/الإخراج المرفق في عبوة اللوحة الأم.

3-2 ضع اللوحة الأم داخل الحاوية عن طريق تثبيتها داخل لوحة الإدخال/الإخراج. قم بتثبيت اللوحة الأم داخل الحاوية بواسطة المسامير.

الخطوة رقم 4. تركيب أجهزة التخزين:

1-4 يرجى إزالة الغطاء الأمامي واللوحة بمقاس 5.25 بوصة من الحاوية.

2-4 ضع أجهزة التخزين من طراز (IDE/SATA/FDD) في أماكنها داخل الحاوية وثبت الجهاز بالبراغي.

الخطوة رقم 2. تركيب وحدات الذاكرة:

قم بإزالة الجانبين وغطاء الحاوية. ثم قم بتثبيت مورد الطاقة بالبراغي.

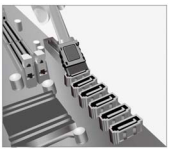
يوصى باستخدام مورد طاقة بقدرة أكبر من 300 واط. يمكن أن تتسبب الطاقة غير الكافية في عدم استقرار عملية التشغيل.

الخطوة رقم 6. تركيب بطاقة التوسعة:

قم بإزالة الجزء المعدني الموجود على الفتحة ثم أدخل بطاقة التوسعة في الفتحة. اضغط على البطاقة بقوة للتأكد من إدخالها بشكل كامل في فتحتها. ثم قم بإعادة البراغي مرة أخرى إلى مواضعها.

الخطوة رقم 7. كبلات التوصيل وموصلات الطاقة:

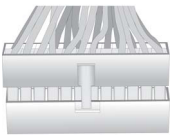
أ. قم بتوصيل محرك الأقراص من طراز SATA بكبل SATA الخاص به



ب. قم بتوصيل موصل الطاقة من طراز SATA بالجهاز من طراز SATA

ج. قم بتوصيل كبل الطاقة المزود بعدد 24 دبوس0

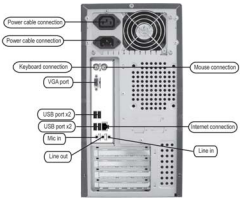
يرجى ملاحظة أنه عند تركيب كبل الطاقة المزود بعدد 24 دبوس، يجب تطابق أقفال كبل الطاقة وموصل ATX بشكل كامل.



د. قم بتوصيل كبل الطاقة المزود بعدد 4 دبوس

يستخدم موصل الطاقة ATX بجهد 12 فولت المزود بعدد 4 دبابيس لتوفير الطاقة لوحدة المعالجة المركزية. عند تركيب كبل الطاقة المزود بعدد 4 دبابيس، يتطابق قفل كبل الطاقة مع موصل ATX بجهد 12 فولت بشكل كامل.

الخطوة رقم 8. منافذ التوصيل في الحاوية:



بمجرد الانتهاء من الخطوات الموضحة أعلاه، يرجى توصيل الأجهزة الطرفية مثل لوحة المفاتيح والفأرة والشاشة، الخ. بعد ذلك يتم توصيل الطاقة وتشغيل النظام. يرجى تثبيت كافة البرامج المطلوبة.

يرجى تركيب كافة الأجهزة الطرفية.

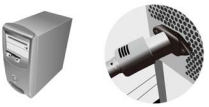
1-8 توصيل لوحة المفاتيح

2-8 توصيل الطابعة

3-8 توصيل الشاشة

4-8 توصيل السماعة

5-8 توصيل الطاقة



6-8 توصيل الفأرة

لتجنب إتلاف المكونات، لا تقم بتشغيل النظام حتى تنتهي من التركيب.

استخدام نظام الإدخال والإخراج الأساسي (BIOS)

يظهر برنامج إعداد (نظام الإدخال والإخراج الأساسي) BIOS حالة تهيئة النظام ويوفر لك خيارات تحديد معلمات النظام. عند تشغيل النظام، يدخل نظام الإدخال والإخراج الأساسي إلى الاختبار الذاتي لبدء التشغيل (POST) بشكل اعتيادي. يرجى الضغط على زر <DEL> أو F2 للدخول إلى قائمة الإعداد. عند التشغيل لأول مرة، قد تعرض شاشة الاختبار الذاتي لبدء التشغيل رسالة "خطأ في إعدادات نظام تشغيل ذاكرة التهيئة (CMOS)". يرجى الدخول إلى نظام الإدخال والإخراج الأساسي واختيار "تحميل الإعدادات الافتراضية" لإعادة ضبط القيم الافتراضية لنظام تشغيل ذاكرة التهيئة. (قد يتسبب تغيير المكونات الصلبة للنظام مثل وحدة المعالجة المركزية ووحدات الذاكرة المختلفة، الخ. في ظهور تلك الرسالة.)

مفاتيح الانتقال داخل نظام الإدخال والإخراج الأساسي

المفتاح	الوظيفة
ESC	الخروج من القائمة الحالية
↑↓←→	للانتقال بين العناصر الظاهرة في القائمة
-/+	تعديل القيمة في الحقل المحدد
Enter	تحديد
F1	تعليمات عامة
F2	القيمة السابقة
F3	الإعدادات الافتراضية المثالية
F4	الحفظ والخروج

قد يختلف ترتيب التركيب وفقا لنوع الحاوية والأجهزة المستخدمة.

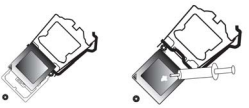
硬件安装指南

安装步骤

1.安装CPU和CPU风扇：

1-1. 松开CPU插槽旁的固定杆，向上拉固定杆，并掀开插槽上的保护盖。

1-2. 将CPU边缘的缺口对准CPU插槽标示边缘，小心地将CPU置入插槽。然后在CPU表层涂抹一层平滑的散热膏。

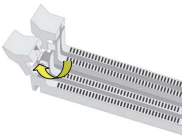


1-3. 将CPU风扇扣具对齐主板上的对应孔位，向下按压并且旋转扣具，固定CPU风扇。

1-4. 将CPU风扇的电源线连接到主板上的CPU风扇接头。

2.安装记忆体模组：

2-1. 向外扳开内存插槽两端的卡扣。



2-2. 对准内存插槽，将内存条往下按直至完全插入。正确安装后插槽两端的卡扣会自动锁住内存条边缘。

3.安装主板：

3-1. 取下机箱后面的I/O挡板，换上主板附带的I/O弹片。

3-2. 将主板的后I/O对准机箱上的I/O挡板孔位，放入机箱并以螺丝固定。

4.安装储存装置:

4-1. 移除机箱的前盖以及5.25吋硬盘挡板。

4-2. 将储存装置放入机箱中对应位置，并以螺丝固定。

5.安装电源装置:

取下机箱侧面和顶部的挡板，安装好电源装置后，用螺丝固定。

建议使用供电***300***瓦以上的电源供应器，以避免电源不足导致无法开机。

6.安装扩充卡:

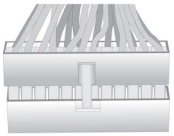
移除机箱后面的扩充金属挡板，确认扩充卡完全插入扩展槽后，重新拧上螺丝。

7.连接电源线与电源接头:

a. 将***SATA***电缆连接至***SATA*** 硬盘

b. 将***SATA***电源接头连接至***SATA***设备

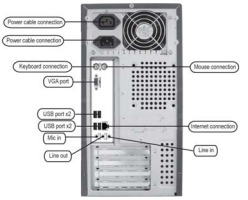
c. 连接***24***针电源线与电源接头
请注意电源接头与电源线必须完全扣合。



d. 连接***4***针电源线与电源接头
4针电源接头提供CPU电源。其电源接头与电源线必须完全扣合。

8.连接机箱端口：

当上述安装步骤完成后，请开始安装键盘，鼠标，显示器等外围设备，然后连接电源并启动系统。请安装好所需的软件。



安装所有外围设备:

8-1. 连接键盘

8-2. 连接打印机

8-3. 连接显示器

8-4. 连接喇叭

8-5. 连接电源

8-6. 连接鼠标

注意: 在安装尚未完成以前请勿开机，以免造成硬件设备毁损。

BIOS使用设定

BIOS程序画面会显示系统配置，同时提供操作选项让您设定系统参数。当开机时，BIOS会进行开机自我测试 (POST)，请点击 <DEL> 或 F2 进入BIOS程序设定。第一次开机时，POST画面可能会显示 “CMOS Settings Wrong” 信息，请进入BIOS选单并选择 “Load Default Settings” 将BIOS重新设定为默认值 (更换CPU或内存等硬件变更也可能会出现此信息)。The BIOS (Basic Input and Output System)

BIOS 操作功能键说明**:**

键	功能
ESC	退出当前菜单
↑↓→←	在选项间移动
+/-	修改选项值
Enter	选择
F1	一般说明
F2	前次设定值
F3	优化预设值
F4	保存设置并退出

此说明内容中提供图片或安装方式仅供参考。

简体中文

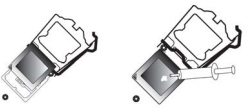
하드웨어 설치 가이드

단계별 설치 방법

1단계. **CPU**와**CPU**쿨러 설치하기:

1-1. 소켓에서 레버를 뽑아 냅니다.

1-2. CPU 끝 부분을 CPU 소켓의 들어간 끝 부분에 맞춥니다. CPU를 정확한 위치에 살며시 위치시킵니다. CPU의 표면에 써멀 그리스를 고르게 도포합니다.

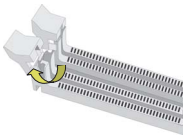


1-3. 패스너를 돌려 CPU 팬을 마더보드의 쓰루-홀에 눌러 넣어 CPU 팬을 제위치에 설치합니다.

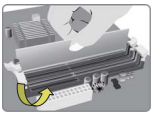
1-4. CPU 쿨러 전원 커넥터를 CPU_FAN 커넥터에 연결합니다.

2단계. 메모리 모듈 설치하기:

2-1. DIMM 슬롯의 각 측면에 있는 걸쇠를 풉니다.



2-2. DIMM이 정확하게 설치될 때까지 단단히 누릅니다. 슬롯 걸쇠를 위로 올려 DIMM의 가장자리를 잠급니다.



3단계. 마더보드 설치하기:

3-1. 케이스의 후면 I/O 플레이트를 마더보드의 패키지에 제공된 I/O 실드로 교체합니다.

3-2. 마더보드를 I/O 플레이트에 위치시켜 케이스 내에. 스크류로 마더보드를 케이스에 고정시킵니다.

4단계. 저장 장치 설치하기:

4-1. 전면 커버와 5.25'' 플레이트를 케이스에서 제거합니다.

4-2. 저장 장치(IDE/SATA/FDD)를 케이스 내부 알맞은 곳에 위치시킨 후 해당 장치를 스크류로 고정시킵니다.

5단계. 케이스 준비 및 전원공급장치의 설치:

케이스의 옆판과 덮개를 제거하고 스크류로 전원 공급장치를 설치합니다.

300W 이상의 전원을 공급하는 전원 공급장치를 사용할 것을 권장합니다. 전원 공급이 충분하지 않을 경우 부팅시 불안정해질 수 있습니다.

6단계. 확장 카드 설치하기:

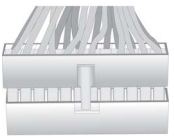
슬롯에 설치되어 있는 금속을 제거하고 확장 카드를 해당 슬롯에 삽입합니다. 슬롯에 완전히 삽입될 수 있도록 카드를 단단히 누릅니다. 스크류를 다시 제 자리에 체결합니다.

7단계. 케이블 및 전원 커넥터 연결하기:

a. SATA 하드 드라이브를 ***SATA*** 케이블에 연결합니다

b. SATA 전원 커넥터를 ***SATA*** 장치에 연결합니다

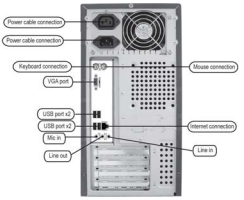
c. 4핀 전원 케이블을 연결합니다
24핀 전원 케이블 연결시 전원 케이블과 ATX 커넥터의 걸쇠가 완벽하게 맞아야 합니다.



d. 4핀 전원 케이블을 연결합니다
ATX_12V 4핀 전원 커넥터는 전원을 CPU에 공급하기 위해 사용됩니다. 4핀 전원 케이블 설치시에는, 전원 케이블의 걸쇠가 ATX_12V 커넥터와 완벽하게 맞아야 합니다.

8단계. 케이스의 포트 연결하기:

일단 위의 단계들이 완료되면, 키보드, 마우스, 모니터 등과 같은 주변기기들을 연결합니다. 그런 후에, 전원을 연결하고 시스템을 켭니다. 모든 필수 소프트웨어를 설치합니다.



모든 주변 기기를 설치합니다.

8-1. 키보드 연결

8-2. 프린터 연결

8-3. 모니터 연결

8-4. 스피커 연결

8-5. 전원 연결

8-6. 마우스 연결

부품 손상을 방지하려면, 설치가 완료될 때까지 시스템의 전원을 켜지 마십시오.

BIOS 사용하기

BIOS 셋업 유틸리티(Setup Utility)는 시스템의 환경설정 상태를 표시하며 시스템 매개변수를 설정하기 위한 옵션을 제공합니다. 시스템의 전원을 켜면, BIOS는 Power-On Self Test (POST) 루틴을 실행합니다, <DEL> 또는 F2를 눌러 셋업으로 들어가십시.오처음으로 전원을 켜면 POST 화면에"CMOS Settings Wrong" 메시지가 나타날 수 있습니다. BIOS로 들어가 "Load Default Settings"을 선택하여 기본 CMOS 설정값을 재설정합니다. (CPU, 메모리 등과 같은 시스템 변경할 때에도 본 메뉴가 나타날 수 있습니다.)

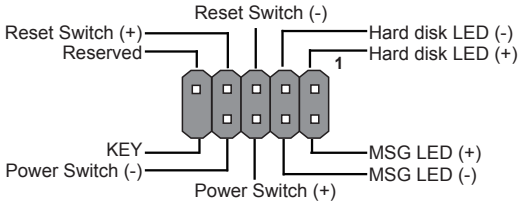
BIOS 메뉴 이동 키

키	기능
ESC	현재 메뉴 나가기
↑↓→←	메뉴 항목 스크롤
+/-	선택된 필드값 수정
Enter	선택
F1	일반적인 도움말
F2	이전 값
F3	최적화 기본값
F4	저장 후 나가기

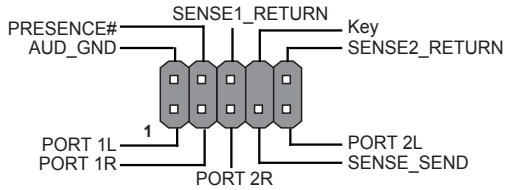
설치절차는 사용된 케이스 및 장치의 유형에 따라 다를 수 있습니다.

Memo

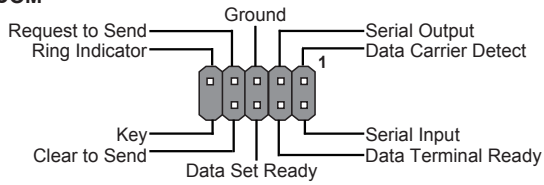
F_PANEL



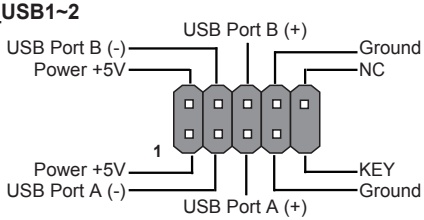
F_AUDIO



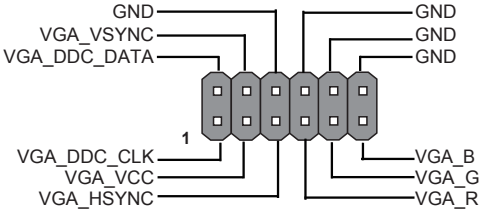
COM



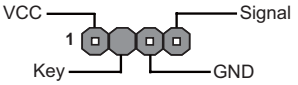
F_USB1~2



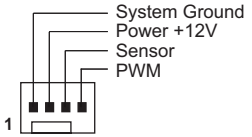
VGA_HEADER



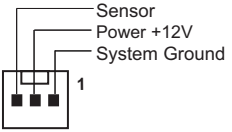
SPK



CPU_FAN



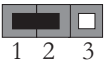
SYS_FAN



1. CASE

2. ME_UNLOCK

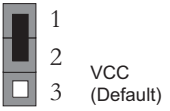
3. CLR_CMOS Jumper



CLR_CMOS

1-2: NORMAL
2-3: CLEAR CMOS
Before clearing the CMOS, make sure to turn off the system.

4. USBPWR_R (Rear USB PS/2 Power Select Jumper)



5. USBPWR_F (Front Panel USB Power Select Jumper)